STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 140103

TO: Ralph J Gitomer **Location: 3d65 / 3e71** **Tuesday, December 14, 2004** **Art Unit: 1651** **Phone: 272-0916** **Serial Number: 10 / 692587**	**From: Jan Delaval** **Location: Biotech-Chem Library** **Rem 1A51** **Phone: 272-2504** **jan.delaval@uspto.gov**

Search Notes

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: R GITOMER Examiner # : 69630 Date: 12/13/04
Art Unit: 1651 Phone Number 30 Serial Number: 10/692,582
Mail Box and Bldg/Room Location: 3D65/3E71 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

JAN

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STAFF USE ONLY	**Type of Search**	**Vendors and cost where applicable**
Searcher:	NA Sequence (#)	STN ✓
Searcher Phone #: 22504	AA Sequence (#)	Dialog
Searcher Location:	Structure (#)	Questel/Orbit
Date Searcher Picked Up: 12/14	Bibliographic ✓	Dr.Link
Date Completed: 12/14	Litigation	Lexis/Nexis
Searcher Prep & Review Time:	Fulltext	Sequence Systems
Clerical Prep Time: 20	Patent Family	WWW/Internet
Online Time: +102	Other	Other (specify)

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=> fil hcaplus
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FILE COVERS 1907 - 14 Dec 2004  VOL 141 ISS 25
FILE LAST UPDATED: 13 Dec 2004  (20041213/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


=> => d his

     (FILE 'HOME' ENTERED AT 09:28:46 ON 14 DEC 2004)
               SET COST OFF

     FILE 'HCAPLUS' ENTERED AT 09:29:00 ON 14 DEC 2004
L1             1 S US20040096924/PN OR (US2000-590884# OR WO2001-US18363 OR US20
               E HAWKINS E/AU
L2            86 S E3-E15,E44,E45
               E CENTANNI J/AU
L3             9 S E3,E5,E6
               E SANKBEIL J/AU
L4             3 S E4,E5
               E WOOD K/AU
L5           152 S E3,E19,E56,E61,E62
               E PROMEGA/PA,CS
L6           250 S E3-E41
               E PACKAGING/CT
L7         25984 S E5-E47
               E E3+ALL
L8          1252 S E1
               E E3+ALL
               E E13+ALL
L9         50328 S E3,E4,E2+NT
L10       111709 S PACKAG?
               E E17+ALL
L11         2507 S E3,E4
L12       126172 S L7-L11
               E LUMINESCENCE/CT
L13       144236 S LUMINESCEN?/CT
               E E3+ALL
L14       226595 S E4,E5,E3+NT
               E E79+ALL
L15        16411 S E3+NT
               E E10+ALL
               E E80+ALL
L16        36806 S E3-E5,E2+NT
               E E58+ALL
               E E81+ALL
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L17          5717 S E12,E13,E11+NT
                  E E24+ALL
L18         49115 S E4,E3+NT
                  E LUMINESCEN/CW
L19        147227 S E4-E6
L20        249745 S ?LUMINESCEN?
L21        517405 S L11-L20
                  E ENZYME/CT
L22        270183 S ENZYM?/CW
L23        226323 S ENZYM?/CT
L24        548044 S ENZYM?/SC,SX
L25        680223 S L22-L24
                  E ORGANIC COMPOUND/CT
L26         41223 S E4
L27             6 S L12 AND L21 AND L25 AND L26
                  E TEST KIT/CT
L28         12335 S E4
                  E E4+ALL
L29         13602 S E2-E4/BI
L30          2203 S L28,L29 AND L21
L31          1089 S L30 AND (L25 OR ?ENZYM?)
L32            52 S L31 AND L12
L33            33 S L31 AND L26
L34            34 S L31 AND ORGANIC()(COMPOUND OR MOLECULE)
L35             1 S L32 AND L33,L34
L36            33 S L34 AND L32,L33
                  SEL DN AN 9 21 23 33
L37             4 S E1-E12
L38             3 S L2-L6 AND L12
L39            72 S L2-L6 AND L21
L40            83 S L2-L6 AND L25
L41             3 S L2-L6 AND L26
L42             8 S L2-L6 AND ORGANIC(L)(COMPOUND OR MOLECULE)
L43             4 S L38,L41,L42 AND L39,L40
L44            34 S L39 AND L40
L45            31 S L44 NOT L37,L38,L41-L43
                  SEL DN AN 2 6 9 23
L46             4 S E13-E24
L47            95 S L37-L42 NOT L43-L46
                  SEL DN AN 2 3 11 39 79
L48             5 S E25-E37
L49            45 S L2-L5 AND L6
L50             6 S L2 AND L3-L5
L51             1 S L3 AND L4,L5
L52             1 S L4 AND L5
L53             6 S L50-L52
L54            14 S L1,L37,L46,L48,L53 AND L1-L53
L55            35 S L49 NOT L54

     FILE 'HCAPLUS' ENTERED AT 10:08:55 ON 14 DEC 2004
                  SEL RN L54

     FILE 'REGISTRY' ENTERED AT 10:09:09 ON 14 DEC 2004
L56           384 S E38-E421
L57             0 S L56 AND SE/ELS
L58            69 S L56 AND S/ELS
L59            66 S L58 AND C/ELS

     FILE 'HCAPLUS' ENTERED AT 10:11:03 ON 14 DEC 2004
L60             9 S L59 AND L54
L61             5 S L54 NOT L60

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FILE COVERS 1907 - 14 Dec 2004 VOL 141 ISS 25
FILE LAST UPDATED: 13 Dec 2004 (20041213/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d l60 all tot

L60 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2004:570131** HCAPLUS
DN **141:119301**
ED Entered STN: 16 Jul 2004
TI Improving the accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents
IN **Hawkins, Erika**; Cali, James J.; Ho, Samuel Kin Sang; O'Brien, Martha; Somberg, Richard; Bulleit, Robert F.; **Wood, Keith V.**
PA **Promega Corporation, USA**
SO PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N
CC 7-1 (**Enzymes**)
Section cross-reference(s): 9
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004059294	A2	20040715	WO 2003-US41454	20031223

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI	US 2002-436173P	P	20021223
	US 2003-444264P	P	20030131
	US 2003-447334P	P	20030213

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004059294	ICM	G01N

AB The invention concerns methods and kits for improving the accuracy of

luciferase-based assays for high throughput screening of compound libraries by reducing the number of false hits. A method and kit is provided for enhancing the tolerance of an assay reagent to compds. in an assay sample, the assay reagent including a luciferase **enzyme.** The method includes contacting the luciferase with a tolerance enhancement agent in an amount sufficient to substantially protect luciferase **enzyme** activity from interference of the compound and minimize interference by at least about 10% relative to an assay not having tolerance enhancement agent. Tolerance-enhancing effect of detergents on the inhibition of luciferase was studied. Minimization of false hit occurrence using tolerance enhancement agents such as detergents was demonstrated.

ST luciferase assay tolerance enhancement agent detergent false hit screening

IT Surfactants
(anionic, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

IT Surfactants
(cationic, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

IT Castor oil
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(ethoxylated, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

IT High throughput screening
Luminescence, bioluminescence
Luminescence spectroscopy
Test kits
(improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

IT Polyoxyalkylenes, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

IT **Enzymes, biological studies**
RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(non-luminogenic; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

IT Surfactants
(nonionic, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

IT Amino acids, uses
Peptides, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(reaction products, with aminoluciferin; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

IT Surfactants
(tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

IT Crown ethers
Polyoxyalkylenes, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

IT Surfactants
(zwitterionic, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using

tolerance enhancement agents)
IT 9016-45-9, Triton N101
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(Tergitol NP 9, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)
IT 9001-92-7, Protease
RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Trypsinase; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)
IT 9002-07-7, Trypsin 9013-05-2, Phosphatase 9031-44-1, Kinase 9035-51-2, Cytochrome P450, biological studies 169592-56-7, Caspase-3 179241-78-2, Caspase-8 180189-96-2, Caspase-9 186322-81-6, Caspase 189258-14-8, Caspase-7 372092-80-3, Protein kinase
RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)
IT 56-65-5, 5'-ATP, uses 58-64-0, 5'-ADP, uses 9014-00-0, Luciferase 61869-41-8, Renilla luciferase 61970-00-1, Firefly luciferase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)
IT **2591-17-5D**, D-Luciferin, derivs. **5571-98-2D**, reaction products with amino acids or peptides
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(luminogenic substrate; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)
IT 57-09-0, CTAB 83-44-3 9002-92-0, Brij 35 9002-93-1, Triton X-100 9003-39-8, Polyvinyl pyrrolidone 9003-47-8, Polyvinyl pyridine 9004-95-9, Brij 58 9014-85-1 10016-20-3, α-Cyclodextrin 12619-70-4, Cyclodextrin 25322-68-3, PEG **75621-03-3**, Chaps **82473-24-3**, Chapso 86303-22-2, Bigchap 106392-12-5, Pluronic L64 188309-93-5, Chemal LA-9 722509-19-5, Pierce C 08 722509-82-2, Pierce C 10
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)
IT 723025-70-5 723025-71-6 723025-72-7 723025-73-8
RL: PRP (Properties)
(unclaimed nucleotide sequence; improving the accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)
IT 723025-66-9 723025-67-0 723025-68-1 723025-69-2
RL: PRP (Properties)
(unclaimed protein sequence; improving the accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

L60 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:270174 HCAPLUS
DN 140:299425
ED Entered STN: 02 Apr 2004
TI **Luminescent** cytochrome P 450 assay using luciferase, luciferin derivatives and pyrophosphatase, and drug screening applications
IN Cali, James J.; Klaubert, Dieter; Daily, William; Ho, Samuel Kin Sang; Frackman, Susan; **Hawkins, Erika**; **Wood, Keith V.**
PA **Promega Corporation, USA**
SO PCT Int. Appl., 130 pp.
CODEN: PIXXD2
DT Patent

LA English
IC ICM G01N
CC 7-1 (**Enzymes**)
Section cross-reference(s): 1, 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004027378	A2	20040401	WO 2003-US29078	20030916
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2004171099	A1	20040902	US 2003-665314	20030919
PRAI	US 2002-412254P	P	20020920		
	US 2003-483309P	P	20030627		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004027378	ICM	G01N

OS MARPAT 140:299425
AB The present invention provides methods, compns., substrates, and kits useful for analyzing the metabolic activity in cells, tissue, and animals and for screening test compds. for their effect on cytochrome P 450 activity. In particular, a one-step and two-step methods using luminogenic mols., e.g. luciferin or coelenterazines, that are cytochrome P 450 substrates and that are also **bioluminescent enzyme** , e.g., luciferase, pro-substrates are provided. Upon addition of the luciferin derivative or other luminogenic mol. into a P 450 reaction, the P 450 **enzyme** metabolizes the mol. into a **bioluminescent enzyme** substrate, e.g., luciferin and/or luciferin derivative metabolite, in a P 450 reaction. The resulting metabolite(s) serves as a substrate of the **bioluminescent enzyme**, e.g., luciferase, in a second light-generating reaction. **Luminescent** cytochrome P 450 assays with low background signals and high sensitivity are disclosed and isoform selectivity is demonstrated. The present invention also provides an improved method for performing luciferase reactions which employs added pyrophosphatase to remove inorg. pyrophosphate, a luciferase inhibitor which may be present in the reaction mixture as a contaminant or may be generated during the reaction. The present method further provides a method for stabilizing and prolonging the **luminescent** signal in a luciferase-based assay using luciferase stabilizing agents such as reversible luciferase inhibitors.
ST cytochrome P 450 detn luciferase luciferin coelenterazine **bioluminescence**; drug screening cytochrome P 450 **luminescent** assay
IT Animal
Animal tissue
Bile
Cell
Feces
Liver
Microsome
(P 450 determination in; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)
IT Transgene
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified);

BIOL (Biological study); PREP (Preparation); USES (Uses)
(animal, P 450 determination in; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT **Enzymes, uses**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**bioluminescent**; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT High throughput screening
(drug; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT Drug screening
(high throughput; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT Teleostei
(in high throughput screening assay; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT Blood analysis
Chemiluminescence spectroscopy
Chemiluminescent substances
Cytolysis
High throughput screening
Luminescence, bioluminescence
Luminescence spectroscopy
Luminescent substances
Surfactants
Test kits
Urine analysis
(**luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT Surfactants
(nonionic; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT **7048-04-6**, Cysteine hydrochloride monohydrate
RL: RCT (Reactant); RACT (Reactant or reagent)
(conversion of 2-cyanobenzothiazole derivs. to D-luciferin derivs.; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT 9035-51-2, Cytochrome P 450, biological studies
RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT 56-65-5, 5'-ATP, uses **2591-17-5D**, Luciferin, derivs.
7439-95-4, Magnesium, uses 55779-48-1, Coelenterazine 55779-48-1D, Coelenterazine, derivs. 676460-49-4D, Imidazo[1,2-a]pyrazin-3-ol, derivs.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT 9014-00-0P, Luciferase 61869-41-8P, Renilla luciferase 61970-00-1P, Firefly luciferase
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT **676460-30-3P 676460-31-4P 676460-32-5P**
676460-33-6P 676460-34-7P 676460-35-8P

676460-37-0P 676460-39-2P 676460-41-6P
676460-43-8P 676460-47-2P, Coelenterazine HH methyl ether
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(**luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT 9024-82-2, Pyrophosphatase
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(**luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT 100-39-0, Benzyl bromide 107-04-0, 1-Bromo-2-chloroethane 402-49-3, 4-(Trifluoromethyl)benzyl bromide **615-20-3**, 2-Chlorobenzothiazole 870-63-3, Prenyl bromide **939-69-5**, 2-Cyano-6-hydroxybenzothiazole **2591-17-5**, D-Luciferin 4916-55-6, 3-(Bromomethyl)pyridine hydrobromide 6138-90-5, Geranyl bromide 31106-82-8, 2-(Bromomethyl)pyridine hydrobromide 73870-24-3, 4-(Bromomethyl)pyridine hydrobromide
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 2-cyanobenzothiazole derivs.; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT 103-63-9P, 2-(Bromoethyl)benzene **2602-85-9P**, 2-Cyanobenzothiazole **676460-20-1P 676460-21-2P**
676460-22-3P 676460-23-4P 676460-24-5P
676460-25-6P 676460-26-7P 676460-27-8P
676460-28-9P 676460-29-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 2-cyanobenzothiazole derivs.; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT 70217-82-2P, Coelenterazine HH
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of coelenterazine derivs.; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT 79-37-8, Oxalyl chloride 108-24-7, Acetic anhydride 156-06-9, Phenylpyruvic acid 17476-04-9, Lithium tri-tert-butoxyaluminohydride 70217-86-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of coelenterazine derivs.; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT 56485-04-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of coelenterazine derivs.; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

IT **92-36-4**, 2-(4-Aminophenyl)-6-methylbenzothiazole **2536-91-6**, 2-Amino-6-methylbenzothiazole
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(stabilization of **luminescent** signal using luciferase inhibitor; **luminescent** cytochrome P 450 assay using luciferase, luciferin derivs. and pyrophosphatase, and drug screening applications)

L60 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2004:220543** HCAPLUS
DN **140:266731**
ED Entered STN: 19 Mar 2004

TI Luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening
IN Somberg, Richard; Goueli, Said A.
PA **Promega Corporation, USA**
SO PCT Int. Appl., 71 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N
CC 7-1 (**Enzymes**)
Section cross-reference(s): 1
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004023098	A2	20040318	WO 2003-US27854	20030905
WO 2004023098	A3	20040701		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2004101922	A1	20040527	US 2003-655878	20030905
PRAI US 2002-408662P	P	20020906		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004023098	ICM	G01N

AB The invention provides methods and kits for detecting transferase activity in a sample by measuring ATP using a composition comprising an ATP-dependent **bioluminescence**-generating **enzyme** such as a luciferase, a luminogenic mol. such as luciferin or derivative, and one or more transferase quenching agents. The present invention provides compns. with properties of enhanced stability comprising a luciferase, a luciferase substrate, and one or more transferase quenching agents. The invention further provides methods using these novel compns. to measure transferase activity in a sample by detecting ATP by reducing the steps of inhibition of transferase and addition of luciferase and substrate to a single step that is then followed by detection of the resulting **luminescence.** The process of the invention significantly reduces the time and effort of luciferase-mediated detection of transferase activity in a sample by eliminating the need to sep. inhibit transferase activity before adding luciferase. The invention can be used for high-throughput inhibitor screening. Exemplary determination of the activity of lipid-dependent serine/threonine kinases, tyrosine kinases, and cAMP-dependent protein kinase A is described. The utility of the invention was also determined in identifying inhibitors in a high-throughput screen.
ST transferase detn luciferase luciferin **luminescence** assay inhibitor screening; serine threonine tyrosine protein kinase detn luciferase **luminescence** assay
IT **Enzymes, biological studies**
RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Sugar kinase; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)
IT Surfactants
(anionic, transferase quenching agent; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT **Enzymes, biological studies**
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**bioluminescence**-generating; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Peptides, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cAMP-dependent protein kinase-inhibiting (PKI), inhibition by; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Biological transport
(carrier-mediated, transferase-dependent, determination of; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Surfactants
(cationic, transferase quenching agent; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT High throughput screening
(drug; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT cDNA sequences
(for luciferase derivs.; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Drug screening
(high throughput; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Transport proteins
RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ion pump, transferase-dependent; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Lampyridae
(luciferase from; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT High throughput screening
Luminescence, bioluminescence
Luminescence spectroscopy
Test kits
(luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Protein sequences
(of luciferase derivs.; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Thermal stability
(of luciferase; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Phosphorylation, biological
(of transferase; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Peptides, biological studies
Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(transferase inhibitor; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Chelating agents
Surfactants
(transferase quenching agent; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Ion channel

RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(transferase-dependent; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT Surfactants
(zwitterionic, transferase quenching agent; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT 673103-68-9
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(amino acid sequence; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT 141349-89-5
RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(family; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT 62996-74-1, Staurosporine
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibition by; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT 372092-80-3, Protein kinase
RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(lipid-dependent; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT 9026-43-1, Serine/threonine kinase 9031-44-1, Kinase 9047-61-4, Transferase 37211-65-7, Polynucleotide kinase 72060-45-8, Lipid kinase 79079-06-4, EGFR kinase 80449-02-1, Protein tyrosine kinase 101463-26-7, PDGFR tyrosine kinase 114051-78-4 134549-83-0, Dual-specificity protein kinase 138359-29-2, c-KIT kinase 140208-17-9, Gene Lyn protein kinase 141349-87-3, Gene Fyn protein kinase 141436-78-4, Calcium/phospholipid-dependent protein kinase C 142008-29-5, CAMP-dependent protein kinase A 142805-58-1, MAPK kinase 146702-84-3, MEK kinase 191808-15-8, 3-Phosphoinositide-dependent protein kinase 1 475489-73-7, Calcium/calmodulin-dependent protein kinase II
RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT 56-65-5, 5'-ATP, biological studies **2591-17-5**, D-Luciferin **2591-17-5D**, D-Luciferin, derivs. 9014-00-0, Luciferase 61970-00-1, Luciferase
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT 673103-67-8
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(nucleotide sequence; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT 57-09-0, Cetyltrimethylammonium bromide 60-00-4, EDTA, biological studies 67-42-5, EGTA 83-44-3 **151-21-3**, SDS, biological studies 1119-94-4, Dodecyltrimethylammonium bromide 7281-04-1, Benzyldimethyldodecylammonium bromide **14933-08-5**, Sulfobetaine 3-10
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(transferase quenching agent; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT 673104-83-1 673104-84-2 673104-85-3
RL: PRP (Properties)
(unclaimed nucleotide sequence; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

IT 673104-80-8 673104-81-9 673104-82-0
RL: PRP (Properties)
(unclaimed protein sequence; luciferase-based **luminescence** assay for detecting transferase activity and use in inhibitor screening)

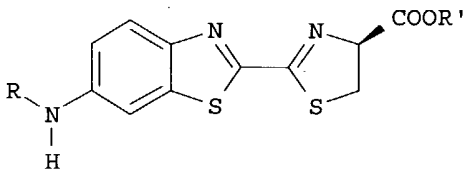
L60 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2003:633682** HCAPLUS
DN **139:193612**
ED Entered STN: 15 Aug 2003
TI **Bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase
IN O'Brian, Martha; **Wood, Keith**; Klaubert, Dieter; Daily, Bill
PA **Promega Corporation, USA**
SO PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D277-66
ICS C12Q001-66; C12Q001-37
CC 7-1 (**Enzymes**)
Section cross-reference(s): 9, 28
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003066611	A1	20030814	WO 2003-US2936	20030131
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003211560	A1	20031113	US 2003-356665	20030131
	EP 1472238	A1	20041103	EP 2003-737580	20030131
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI	US 2002-353158P	P	20020201		
	WO 2003-US2936	W	20030131		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003066611	ICM	C07D277-66
	ICS	C12Q001-66; C12Q001-37

GI



I

AB A sensitive **bioluminescent** assay to detect proteases including caspases, trypsin and tryptase is provided. The method comprises contacting a sample suspected of having one or more caspases with a mixture comprising beetle luciferase and an aminomodified beetle aminoluciferin or a carboxyterminal protected derivative thereof, wherein the amino group of aminoluciferin or the derivative thereof is modified so as to covalently link a substrate for the caspase via a peptide bond to aminoluciferin or the carboxyterminal protected derivative thereof. If the sample comprises a caspase having a recognition site in the substrate, the substrate is cleaved at the peptide bond that links the substrate to aminoluciferin, yielding aminoluciferin, a substrate for the luciferase, in the mixture **Luminescence** is then detected. The method further comprises correlating **luminescence** with protease concentration or activity, i.e., increased **luminescence** correlates with increased protease concentration or activity. Also provided is a compound comprising aminoluciferin or a carboxyterminal protected derivative thereof covalently linked via a peptide bond to a protease recognition site such as a caspase recognition site, a trypsin recognition site, or a tryptase recognition site. A specific compound of the invention is a compound of formula I (R = peptide with an aspartic acid, lysine, or arginine C-terminus; R' = H, carboxy protecting group, e.g., C1-6-alkyl, Ph, benzyl ester, counterion). The invention also provides synthetic processes and intermediates disclosed herein, which are useful for preparing compds. of the invention. As described herein below, using a substrate for caspase 3 and 7 that was linked to either aminoluciferin or rhodamine-110, it was found that the limit of detection for the aminoluciferin-based substrate was 0.2 to 0.5 μU of purified caspase while that for the rhodamine-110-based substrate was 10 μU. As also described herein, it was found that the limit of detection of caspase expressing cells with the aminoluciferin-based substrate was 15 cells at 1 h while the limit of detection for the rhodamine-1 10-based substrate was 150 cells at 1 h.

ST **bioluminescent** protease assay aminoluciferin peptide substrate luciferase

IT **Luminescence, bioluminescence**
Protein sequences
(**bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT Peptides, biological studies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT Protein degradation
(by aminopeptidases, substrate is modified to prevent; **bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT 182374-54-5 211918-90-0 223538-18-9
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(amino acid sequence; **bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT 9002-07-7, Trypsin 97501-93-4, Tryptase 169592-56-7, Caspase 3
186322-81-6, Caspase 189258-14-8, Caspase 7
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(**bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT **161055-47-6D**, amino-modified **578705-49-4**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT 9014-00-0, Luciferase
RL: ARG (Analytical reagent use); CAT (Catalyst use); ANST (Analytical study); USES (Uses)
(**bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT **578705-44-9P**
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(**bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT 2419-56-9 3338-32-7 **3374-22-9**, Cysteine **7724-12-1**
7765-73-3 71989-14-5 130878-68-1 131117-31-2
578705-48-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(**bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT 3057-74-7P 95718-23-3P 223539-63-7P 234442-62-7P
578705-43-8P 578705-45-0P **578705-46-1P**
578705-47-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT 9031-94-1, Aminopeptidase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(degradation by, substrate is modified to prevent; **bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT 9001-92-7, Protease
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(protease; **bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT **161055-47-6**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(release of, by protease cleavage of substrate; **bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT 581827-31-8 581827-32-9
RL: PRP (Properties)
(unclaimed protein sequence; **bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

IT 189275-68-1 220846-54-8 223538-21-4 223538-36-1 287376-81-2
340696-38-0 478001-09-1 581085-71-4 581085-72-5
RL: PRP (Properties)
(unclaimed sequence; **bioluminescent** protease assay using aminoluciferin linked to peptide substrate and luciferase)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Chang, H; MICROBIOLOGY AND MOLECULAR BIOLOGY REVIEWS: MMBR 2000, V64(4), P821 HCAPLUS

(2) Geiger, R; US 5035999 A 1991 HCAPLUS

(3) Merrifield, B; SCIENCE 1986, V232, P341 HCAPLUS
(4) Monsees, T; ANALYTICAL BIOCHEMISTRY 1994, V221(2), P329 HCAPLUS
(5) Monsees, T; JOURNAL OF BIOLUMINESCENCE AND CHEMILUMINESCENCE 1995, V10(4), P213 HCAPLUS

L60 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2001:924094** HCAPLUS
DN **136:50649**
ED Entered STN: 21 Dec 2001
TI Method for increasing **luminescence** assay sensitivity
IN **Hawkins, Erika; Centanni, John M.; Sankbeil, Jacqueline; Wood, Keith V.**
PA **Promega Corporation, USA**
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-48
CC 9-5 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001096862	A2	20011220	WO 2001-US18363	20010607 <--
	WO 2001096862	A3	20020718		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2411179	AA	20011220	CA 2001-2411179	20010607 <--
	EP 1297337	A2	20030402	EP 2001-942027	20010607 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004503777	T2	20040205	JP 2002-510941	20010607 <--
	US 2004096924	A1	20040520	US 2003-692587	20031024 <--
PRAI	US 2000-590884	A	20000609 <--		
	WO 2001-US18363	W	20010607 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001096862	ICM	G01N033-48
JP 2004503777	FTERM	2G054/AA06; 2G054/EA01; 2G054/EA02; 4B063/QA20; 4B063/QQ61; 4B063/QQ91; 4B063/QR02; 4B063/QR58; 4B063/QS26; 4B063/QS36; 4B063/QX02 <--
US 2004096924	ECLA	G01N033/58D <--

AB A method for increasing the sensitivity of a **luminescent** assay comprising carrying out the assay in the presence of an **organic compound** that reduces **luminescence** that is not dependent on the presence of an analyte by at least about 10 fold, and that reduces **luminescence** that is dependent on the presence of an analyte by less than about 7 fold.
ST **luminescence** assay
IT **Luminescence**
(**Autoluminescence**; method for increasing **luminescence** assay sensitivity)
IT **Enzymes, uses**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**Luminescent**; method for increasing **luminescence** assay sensitivity)

IT Molecules
(Luminogenic; method for increasing **luminescence** assay sensitivity)
IT **Enzymes, uses**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Luminogenic; method for increasing **luminescence** assay sensitivity)
IT Proteins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Obelins; method for increasing **luminescence** assay sensitivity)
IT Buffers
Cell
Concentration (condition)
Containers
Detergents
Luminescence
Luminescence quenching
Luminescence spectroscopy
Oxidation
Packaging materials
Solutions
Solvents
Test kits
Weight
pH
(method for increasing **luminescence** assay sensitivity)
IT Aequorins
Enzymes, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for increasing **luminescence** assay sensitivity)
IT Gelatins, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method for increasing **luminescence** assay sensitivity)
IT **Organic compounds, analysis**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method for increasing **luminescence** assay sensitivity)
IT Albumins, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(serum, bovine; method for increasing **luminescence** assay sensitivity)
IT 56-65-5, 5'-ATP, uses 521-31-3, Luminol **2591-17-5**, Beetle luciferin 9001-78-9, Alkaline phosphatase 9014-00-0, Luciferase 61869-41-8, Renilla luciferase 61969-99-1, Cypridina luciferase 61970-00-1, Firefly luciferase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for increasing **luminescence** assay sensitivity)
IT **62-56-6**, Thiourea, analysis **67-68-5**, DMSO, analysis **105-81-7**, 1-Allyl-3-(2-hydroxyethyl)-2-thiourea **3180-51-6**, 6-Azathiothymidine 7722-84-1, Hydrogen peroxide, analysis 7732-18-5, Water, analysis 7775-14-6, Sodium hydrosulfite 9005-64-5, Tween 20 55779-48-1, Coelenterazine 71833-44-8, Zwittergent
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method for increasing **luminescence** assay sensitivity)

L60 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2001:31675** HCAPLUS
DN **134:83111**
ED Entered STN: 12 Jan 2001
TI Methods and compositions for assaying analytes
IN Yuan, Chong-Sheng
PA General Atomics, USA
SO PCT Int. Appl., 187 pp.

CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-00
CC 9-16 (Biochemical Methods)
Section cross-reference(s): **7**

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001002600	A2	20010111	WO 2000-US18057	20000630
	WO 2001002600	A3	20020110		
	WO 2001002600	C2	20020725		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6376210	B1	20020423	US 1999-347878	19990706
	CA 2377665	AA	20010111	CA 2000-2377665	20000630
	GB 2368641	A1	20020508	GB 2002-425	20000630
	GB 2368641	B2	20041006		
PRAI	US 1999-347878	A	19990706		
	US 1999-457205	A	19991206		
	WO 2000-US18057	W	20000630		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001002600	ICM	C12Q001-00
US 6376210	ECLA	C12Q001/25; G01N033/84; C12Q001/34; G01N033/573
GB 2368641	ECLA	C12Q001/25; C12Q001/34; G01N033/573; G01N033/84

AB Compns. and methods for assaying analytes, preferably, small mol. analytes are provided. Assay methods employ, in place of antibodies or mols. that bind to target analytes or substrates, modified **enzymes**, called substrate trapping **enzymes.** These modified **enzymes** retain binding affinity or have enhanced binding affinity for a target substrate or analyte, but have attenuated catalytic activity with respect to that substrate or analyte. The modified **enzymes** are provided. In particular, mutant S-adenosylhomocysteine (SAH) hydrolases, substantially retaining binding affinity or having enhanced binding affinity for homocysteine or S-adenosylhomocysteine but having attenuated catalytic activity, are provided. Conjugates of the modified **enzymes** and a facilitating agent, such as agents that aid in purification or linkage to a solid support are also provided.

ST compn assaying analyte
IT **Enzymes, analysis**
RL: ANT (Analyte); ANST (Analytical study)
(Bile acid-binding; methods and compns. for assaying analytes)
IT **Enzymes, uses**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Bile salts-binding; methods and compns. for assaying analytes)
IT **Enzymes, uses**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Cholesterol-binding; methods and compns. for assaying analytes)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(DNA-binding; methods and compns. for assaying analytes)
IT Conformation
(DNA; methods and compns. for assaying analytes)
IT **Enzymes, uses**

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Ethanol binding; methods and compns. for assaying analytes)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(Fluorescent; methods and compns. for assaying analytes)
IT **Enzymes, uses**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Folate-binding; methods and compns. for assaying analytes)
IT **Enzymes, uses**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Glucose-binding; methods and compns. for assaying analytes)
IT **Enzymes, uses**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Homocysteine-binding; methods and compns. for assaying analytes)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(IgG-binding; methods and compns. for assaying analytes)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(Polysaccharide binding; methods and compns. for assaying analytes)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(RNA-binding; methods and compns. for assaying analytes)
IT Esters, analysis
RL: ANT (Analyte); ANST (Analytical study)
(Sterol fatty acid; methods and compns. for assaying analytes)
IT Carbohydrates, analysis
RL: ANT (Analyte); ANST (Analytical study)
(Tetroses; methods and compns. for assaying analytes)
IT **Enzymes, uses**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Uric acid-binding; methods and compns. for assaying analytes)
IT **Enzyme functional sites**
(active; methods and compns. for assaying analytes)
IT Purification
(affinity; methods and compns. for assaying analytes)
IT Carbohydrates, analysis
RL: ANT (Analyte); ANST (Analytical study)
(aldoses; methods and compns. for assaying analytes)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(contractile; methods and compns. for assaying analytes)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(defense; methods and compns. for assaying analytes)
IT DNA
RL: ANT (Analyte); ANST (Analytical study)
(double-stranded; methods and compns. for assaying analytes)
IT Vitamins
RL: ANT (Analyte); ANST (Analytical study)
(fat-soluble; methods and compns. for assaying analytes)
IT Carbohydrates, analysis
RL: ANT (Analyte); ANST (Analytical study)
(heptoses; methods and compns. for assaying analytes)
IT Carbohydrates, analysis
RL: ANT (Analyte); ANST (Analytical study)
(ketoses; methods and compns. for assaying analytes)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(lipid-binding; methods and compns. for assaying analytes)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(metal-binding; methods and compns. for assaying analytes)

IT Affinity
Amniotic fluid
Animal cell
Animal tissue
Anions
Artery
Blood analysis
Body fluid
Catalysts
Cell
Cerebrospinal fluid
Composition
Conjugation (molecular association)
Connective tissue
DNA repair
Disease, animal
Drugs
Epithelium
Epitopes
Escherichia coli
Feces
Fluorescent substances
Fungi
Genetic markers
Hydrolysis
Immobilization, biochemical
Infection
Insect (Insecta)
Ions
Lactobacillus casei
Liver
Lymph node
Michaelis constant
Molecules
Mucus
Muscle
Mutation
Neoplasm
Nerve
Organ, animal
Oxidation
Pancreas
Plant cell
Plasmids
Protein sequences
Purification
Recombination, genetic
Saliva
Semen
Sputum
Sulfhydryl group
Tear (ocular fluid)
Test kits
Therapy
Thermoanaerobacterium thermosulfurigenes
Transcription, genetic
Urine analysis
Yeast
(methods and compns. for assaying analytes)

IT Amino acids, analysis
Bile acids
Bile salts
Cardiolipins

Cerebrosides
Fusion proteins (chimeric proteins)
Gangliosides
Glycerides, analysis
Glycerophospholipids
Hexoses
Inorganic compounds
Lipids, analysis
Monosaccharides
Nucleic acids
Nucleosides, analysis
Nucleotides, analysis
Oligonucleotides
Oligosaccharides, analysis
Organic compounds, analysis
Pentoses
Peptides, analysis
Phosphatidylcholines, analysis
Phosphatidylethanolamines, analysis
Phosphatidylinositols
Phosphatidylserines
Polysaccharides, analysis
Sphingolipids
Sphingomyelins
Sterols
Transport proteins
Vitamins
Waxes
RL: ANT (Analyte); ANST (Analytical study)
(methods and compns. for assaying analytes)

IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and compns. for assaying analytes)

IT **Coenzymes**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and compns. for assaying analytes)

IT Reagents
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and compns. for assaying analytes)

IT **Enzymes, uses**
RL: ARG (Analytical reagent use); CAT (Catalyst use); ANST (Analytical study); USES (Uses)
(methods and compns. for assaying analytes)

IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(motile; methods and compns. for assaying analytes)

IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(nutrient; methods and compns. for assaying analytes)

IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(regulatory; methods and compns. for assaying analytes)

IT DNA formation
(replication; methods and compns. for assaying analytes)

IT Fatty acids, analysis
RL: ANT (Analyte); ANST (Analytical study)
(saturated; methods and compns. for assaying analytes)

IT DNA
RL: ANT (Analyte); ANST (Analytical study)
(single-stranded; methods and compns. for assaying analytes)

IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(storage; methods and compns. for assaying analytes)

IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(structural; methods and compns. for assaying analytes)
IT Recombination, genetic
(transposition; methods and compns. for assaying analytes)
IT Vitamins
RL: ANT (Analyte); ANST (Analytical study)
(water-soluble; methods and compns. for assaying analytes)
IT 9033-25-4, Methyltransferase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Betane-homocysteine; methods and compns. for assaying analytes)
IT 50-69-1, Ribose 50-81-7, Ascorbic acid, analysis 50-89-5, Thymidine, analysis 50-99-7, Glucose, analysis **52-90-4**, Cysteine, analysis 53-57-6, Nadph 53-84-9, Nad+ 54-47-7, Pyridoxal 5'-phosphate 56-40-6, Glycine, analysis 56-41-7, Alanine, analysis 56-45-1, Serine, analysis 56-65-5, Atp, analysis 56-82-6, Glyceraldehyde 56-84-8, Aspartic acid, analysis 56-85-9, Glutamine, analysis 56-86-0, Glutamic acid, analysis 56-87-1, Lysine, analysis 57-10-3, Palmitic acid, analysis 57-11-4, Octadecanoic acid, analysis 57-48-7, Fructose, analysis 57-88-5, Cholesterol, analysis 58-61-7, Adenosine, analysis 58-64-0, Adp, analysis 58-68-4, Nadh **58-85-5**, Biotin 58-86-6, Xylose, analysis 58-96-8, Uridine 58-97-9, Ump, analysis 58-98-0, Udp, analysis 59-23-4, Galactose, analysis 59-30-3, analysis **59-43-8**, Thiamine, analysis 59-67-6, Nicotinic acid, analysis 60-18-4, Tyrosine, analysis 61-19-8, Amp, analysis 61-90-5, Leucine, analysis 63-37-6, Cmp 63-38-7, Cdp 63-39-8, Utp **63-68-3**, Methionine, analysis 63-91-2, Phenylalanine, analysis 64-17-5, Ethanol, analysis 65-23-6, Pyridoxin 65-42-9, Lyxose 65-46-3, Cytidine 65-47-4, Ctp 68-19-9, Vitamin b12 69-93-2, Uric acid, analysis 70-47-3, Asparagine, analysis 71-00-1, Histidine, analysis 72-18-4, Valine, analysis 72-19-5, Threonine, analysis 73-22-3, Tryptophan, analysis 73-32-5, Isoleucine, analysis 74-79-3, Arginine, analysis 79-83-4, Pantothenic acid 83-48-7, Stigmasterol 83-88-5, Riboflavin, analysis 85-32-5, Gmp 86-01-1, Gtp 107-43-7, Betaine 118-00-3, Guanosine, analysis 122-32-7, Triolein 134-35-0 143-07-7, Lauric acid, analysis 146-91-8, Gdp 147-81-9, Arabinose 147-85-3, Proline, analysis 365-07-1, Dtmp 365-08-2, Dttp 453-17-8, Triose 491-97-4, Dtdp 506-30-9, Arachidic acid 544-63-8, Myristic acid, analysis 555-43-1, Tristearin 555-44-2, Tripalmitin 557-59-5, Lignoceric acid 653-63-4, Damp 800-73-7, Dcdp 902-04-5, Dgmp 964-26-1, Dump **979-92-0**, S-Adenosylhomocysteine 1032-65-1, Dcmp 1406-16-2, Vitamin d 1406-18-4, Vitamin e 1758-51-6, Erythrose 1927-31-7, Datp 2056-98-6, Dctp 2152-76-3, Idose 2564-35-4, Dgtp 2793-06-8, Dadp 3019-74-7, Sedoheptulose 3432-99-3 3458-28-4, Mannose 3493-09-2, Dgdp 4033-27-6 5556-48-9, Ribulose 5987-68-8, Altrose **6027-13-0**, Homocysteine 6038-51-3, Allose 7439-89-6, Iron, analysis 7439-95-4, Magnesium, analysis 7439-96-5, Manganese, analysis 7439-98-7, Molybdenum, analysis 7440-02-0, Nickel, analysis 7440-09-7, Potassium, analysis 7440-21-3, Silicon, analysis 7440-23-5, Sodium, analysis 7440-31-5, Tin, analysis 7440-38-2, Arsenic, analysis 7440-42-8, Boron, analysis 7440-47-3, Chromium, analysis 7440-48-4, Cobalt, analysis 7440-50-8, Copper, analysis 7440-62-2, Vanadium, analysis 7440-66-6, Zinc, analysis 7440-70-2, Calcium, analysis 7553-56-2, Iodine, analysis 7732-18-5, Water, analysis 7782-41-4, Fluorine, analysis 7782-44-7, Oxygen, analysis 7782-50-5, Chlorine, analysis 9004-34-6, Cellulose, analysis 9004-61-9, Hyaluronic acid 9005-25-8, Starch, analysis 9005-79-2, Glycogen, analysis 11103-57-4, Vitamin a 12001-79-5, Vitamin k 12672-30-9, Arsenic ion, analysis 15158-11-9, analysis 16887-00-6, Chloride, analysis 16984-48-8, Fluoride, analysis 19163-87-2, Gulose 29884-64-8, Threose 30077-17-9, Talose 42616-25-1, Methioninase
RL: ANT (Analyte); ANST (Analytical study)
(methods and compns. for assaying analytes)

IT 9001-36-9, Glucokinase 9001-51-8, Hexokinase 9001-56-3, Hydroxy steroid dehydrogenase 9001-78-9, Alkaline phosphatase 9002-03-3, Dihydrofolate reductase 9002-12-4, Urate oxidase 9002-13-5, Urease 9003-99-0, Peroxidase 9023-99-8D, Cystathionine β-synthase, mutant 9025-54-1D, S-Adenosylhomocysteine hydrolase, mutant 9026-00-0, Cholesterol esterase 9028-69-7, Methylenetetrahydrofolate reductase 9028-76-6, Cholesterol oxidase 9031-61-2, Thymidylate synthase 9031-72-5, Alcohol dehydrogenase 9055-00-9, Glucose isomerase 37290-90-7, Methionine synthase 50812-37-8, Glutathione S-transferase 61969-99-1, Luciferase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and compns. for assaying analytes)

L60 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1997:740386** HCAPLUS
DN **128:11618**
ED Entered STN: 24 Nov 1997
TI **Chemiluminescent** compositions and their use in the detection of hydrogen peroxide
IN Ullman, Edwin F.; Singh, Sharat
PA Behringwerke Aktiengesellschaft, Germany; Ullman, Edwin F.
SO PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-58
ICS C12Q001-28
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 1, 2, 15, 79
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9741442	A1	19971106	WO 1997-US7265	19970501
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 852012	A1	19980708	EP 1997-922568	19970501
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE				
	US 6143514	A	20001107	US 1997-850026	19970501
PRAI	US 1996-17075P	P	19960501		
	WO 1997-US7265	W	19970501		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9741442	ICM	G01N033-58
	ICS	C12Q001-28
WO 9741442	ECLA	C12Q001/28; G01N033/58D; G01N033/58H

AB Compns., methods, and kits are disclosed for detecting hydrogen peroxide or a compound capable of generating hydrogen peroxide, especially in clin. chemical
The compns. comprise a matrix having incorporated therein a label capable of being modified by singlet oxygen. A catalyst capable of catalyzing the formation of singlet oxygen is bound to the matrix, which permits the diffusion of singlet oxygen therein. A sample suspected of containing a compound that can generate hydrogen peroxide is combined with a composition in accordance with the present invention. The combination is subjected to conditions wherein such compound generates hydrogen peroxide. The reaction of singlet oxygen with the label is determined, the reaction thereof indicating the presence of the compound capable of generating hydrogen peroxide. Examples are given of the determination of glucose, cholesterol, theophylline, chorionic gonadotropin,.
ST hydrogen peroxide detection **chemiluminescence** singlet oxygen; biomol metabolite detn hydrogen peroxide
IT Membrane, biological

(bilayer; **chemiluminescent** compns. for detecting hydrogen peroxide)
IT Blood analysis
Body fluid
Chemiluminescence spectroscopy
Chemiluminescent substances
Fluorescent substances
Fluorometry
Latex
Liposomes
Test kits
Urine analysis
(**chemiluminescent** compns. for detecting hydrogen peroxide)
IT Antigens
Organic compounds, analysis
Peptides, analysis
Polynucleotides
RL: ANT (Analyte); ANST (Analytical study)
(**chemiluminescent** compns. for detecting hydrogen peroxide)
IT Alkenes, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**chemiluminescent** compns. for detecting hydrogen peroxide)
IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**chemiluminescent** compns. for detecting hydrogen peroxide)
IT **Enzymes, uses**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**chemiluminescent** compns. for detecting hydrogen peroxide)
IT Tellurides
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**chemiluminescent** compns. for detecting hydrogen peroxide)
IT Alcohols, biological studies
Amines, biological studies
Carbohydrates, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**chemiluminescent** compns. for detecting hydrogen peroxide)
IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(immobilized; **chemiluminescent** compns. for detecting hydrogen peroxide)
IT Liposomes
(multilamellar; **chemiluminescent** compns. for detecting hydrogen peroxide)
IT 50-99-7, Glucose, analysis 57-88-5, Cholesterol, analysis 58-55-9, Theophylline, analysis 7722-84-1, Hydrogen peroxide (H2O2), analysis 9002-61-3, Chorionic gonadotropin
RL: ANT (Analyte); ANST (Analytical study)
(**chemiluminescent** compns. for detecting hydrogen peroxide)
IT 58-55-9D, Theophylline, galactose oxidase conjugates, uses 6788-84-7, Dioxetane 9001-37-0, Glucose oxidase 9003-99-0, Peroxidase 9013-20-1, Streptavidin 9028-76-6, Cholesterol oxidase 9028-79-9, Galactose oxidase 9028-79-9D, Galactose oxidase, theophylline conjugates 9055-20-3, Chloroperoxidase 27980-52-5 93229-67-5, Haloperoxidase 199116-58-0
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**chemiluminescent** compns. for detecting hydrogen peroxide)
IT 7296-64-2, β-D-Galactose
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(**chemiluminescent** compns. for detecting hydrogen peroxide)
IT 9003-99-0D, Lactoperoxidase, immobilized

RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(**chemiluminescent** compns. for detecting hydrogen peroxide)

IT 9003-99-0DP, Lactoperoxidase, biotinylated
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(**chemiluminescent** compns. for detecting hydrogen peroxide)

IT 7440-06-4, Platinum, analysis 128523-62-6
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(**chemiluminescent** compns. for detecting hydrogen peroxide)

IT 58-68-4, NADH 69-93-2, Uric acid, biological studies 92-83-1, Xanthene
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**chemiluminescent** compns. for detecting hydrogen peroxide)

IT **60-24-2** 66-71-7, 1,10-Phenanthroline 106-40-1, 4-Bromoaniline 112-71-0, 1-Bromotetradecane 1074-12-0, Phenylglyoxal
RL: RCT (Reactant); RACT (Reactant or reagent)
(**chemiluminescent** compns. for detecting hydrogen peroxide)

IT 192937-53-4P 199116-59-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**chemiluminescent** compns. for detecting hydrogen peroxide)

IT **14054-87-6DP**, derivs. **14054-87-6P 192937-52-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(**chemiluminescent** compns. for detecting hydrogen peroxide)

IT 7782-44-7, Oxygen, uses
RL: ARG (Analytical reagent use); FMU (Formation, unclassified); ANST (Analytical study); FORM (Formation, nonpreparative); USES (Uses)
(singlet; **chemiluminescent** compns. for detecting hydrogen peroxide)

L60 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1997:124462** HCAPLUS
DN **126:128995**
ED Entered STN: 24 Feb 1997
TI Quenching reagents and assays for enzyme-mediated **luminescence**
IN Sherf, Bruce A.; **Wood, Keith V.**; Schenborn, Elaine T.
PA **Promega Corporation, USA**
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-66
CC 9-5 (Biochemical Methods)
Section cross-reference(s): **7**, 79, 80
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9640988	A1	19961219	WO 1996-US9833	19960606
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
US 5744320	A	19980428	US 1995-472546	19950607
CA 2221522	AA	19961219	CA 1996-2221522	19960606
CA 2221522	C	20031007		
AU 9661089	A1	19961230	AU 1996-61089	19960606
AU 721172	B2	20000622		
EP 833939	A1	19980408	EP 1996-918421	19960606
EP 833939	B1	20020403		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, FI

	JP 11507534	T2	19990706	JP 1996-502037	19960606
	AT 215609	E	20020415	AT 1996-918421	19960606
	PT 833939	T	20020930	PT 1996-918421	19960606
	ES 2173292	T3	20021016	ES 1996-918421	19960606
PRAI	US 1995-472546	A	19950607		
	WO 1996-US9833	W	19960606		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9640988	ICM	C12Q001-66
WO 9640988	ECLA	C12Q001/66; G01N033/58B
US 5744320	ECLA	C12Q001/66; G01N033/58B

AB The present invention relates to single and dual-reporter **luminescence** assays utilizing general and specific reagents to quench enzyme (e.g., luciferase)-mediated reactions. In one embodiment of the invention, a reagent is added to the assay which non-specifically quenches enzyme-mediated **luminescent** reactions. In another embodiment of the invention, a reagent is added to the assay which simultaneously quenches one enzyme-mediated **luminescent** reaction while activating another distinct enzyme-mediated **luminescent** reaction. An assay kit containing specific quench reagents and the reagents themselves are also disclosed.

ST enzyme mediated **luminescence** assay quenching reagent; luciferase mediated **luminescence** assay quenching reagent

IT Inks
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process); USES (Uses)
(India; quenching reagents and assays for enzyme-mediated **luminescence**)

IT Analysis
(enzymic anal.; quenching reagents and assays for enzyme-mediated **luminescence**)

IT **Luminescence quenching**
Luminescence spectroscopy
(quenching reagents and assays for enzyme-mediated **luminescence**)

IT 9014-00-0, Luciferase 61970-00-1, Photinus pyralis luciferase
RL: ARG (Analytical reagent use); CAT (Catalyst use); ANST (Analytical study); USES (Uses)
(quenching reagents and assays for enzyme-mediated **luminescence**)

IT 56-65-5, uses 60-00-4, EDTA, uses 67-63-0, Isopropanol, uses 71-36-3, 1-Butanol, uses 77-92-9, Citric acid, uses **92-36-4**, 2-(4-Aminophenyl)-6-methylbenzothiazole **95-16-9**, Benzothiazole **151-21-3**, SDS, uses **883-93-2**, 2-Phenylbenzothiazole 2190-95-6, Dimethyldecylphosphine oxide **3411-95-8**, 2-(o-Hydroxyphenyl)benzothiazole 7553-56-2, Iodine, uses 7681-82-5, Sodium iodide, uses 7722-88-5, Tetrasodium pyrophosphate 7757-82-6, Sodium sulfate, uses 9002-93-1, Triton x-100 9005-64-5, Tween 20 13291-61-7, trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraacetic acid 14000-31-8, Pyrophosphate 14797-55-8, Nitrate, uses 14808-79-8, Sulfate, uses **20115-09-7** 20461-54-5, Iodide, uses 55779-48-1, Coelenterazine
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process); USES (Uses)
(quenching reagents and assays for enzyme-mediated **luminescence**)

L60 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1992:230750** HCAPLUS
DN **116:230750**
ED Entered STN: 13 Jun 1992

TI Improved kinetics of light production by beetle luciferase using thiol reagents
IN **Wood, Keith V.**
PA **Promega Corp., USA**
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-66
CC 7-1 (**Enzymes**)
Section cross-reference(s): 9
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9204468	A1	19920319	WO 1991-US6474	19910909
	W: AU, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	US 5283179	A	19940201	US 1990-580371	19900910
	AU 9188583	A1	19920330	AU 1991-88583	19910909
	AU 649289	B2	19940519		
	EP 553234	A1	19930804	EP 1991-919421	19910909
	EP 553234	B1	19981111		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	JP 06500921	T2	19940127	JP 1991-517531	19910909
	JP 3171595	B2	20010528		
	AT 173298	E	19981115	AT 1991-919421	19910909
	ES 2126576	T3	19990401	ES 1991-919421	19910909
	JP 2001224398	A2	20010821	JP 2000-400335	19910909
	US 5650289	A	19970722	US 1994-189558	19940131
	US 5641641	A	19970624	US 1995-485834	19950607
	US 5814471	A	19980929	US 1997-831781	19970409
PRAI	US 1990-580371	A	19900910		
	JP 1991-517531	A3	19910909		
	WO 1991-US6474	A	19910909		
	US 1994-189558	A3	19940131		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9204468	ICM	C12Q001-66

AB A method for improving kinetics of light production in beetle luciferase-luciferin reactions involves adding a thiol reagent to the assay solution Addition of a protein stimulator of luciferase activity, such as bovine serum albumin (BSA), and a luciferase inhibitor such as aminoethanol or phosphate also improves the kinetics. Addition of CoA, dithiothreitol, and BSA to a Photinus pyralis luciferase assay increased light production 15-fold.
ST luciferase detn thiol reagent; aminoethanol luciferase detn; phosphate luciferase detn; bovine serum albumin luciferase detn
IT Albumins, uses
Thiols, uses
RL: USES (Uses)
(luciferase determination in presence of, increased light production in)
IT Beetle
Photinus pyralis
(luciferase of, determination of, thiol reagents for improved of light production by)
IT Kinetics, **enzymic**
(of light generation by luciferin/luciferase systems, effects of thiol reagents on)
IT 9014-00-0, Luciferase
RL: ANT (Analyte); ANST (Analytical study)

(determination of, thiol reagents in improvement of light production in)
IT **59-52-9**, 2,3-Dithiopropanol **60-24-2**,
β-Mercaptoethanol **70-18-8**, Glutathione, miscellaneous
85-61-0, CoA, miscellaneous 141-43-5, 2-Aminoethanol,
miscellaneous **3001-64-7 3483-12-3**, Dithiothreitol
6892-68-8, Dithioerythritol
RL: ANST (Analytical study)
(luciferase determination in presence of, improved of light production by)
IT 14265-44-2, Phosphate, miscellaneous **19721-22-3**,
3-Mercaptopropanol
RL: MSC (Miscellaneous)
(luciferase determination in presence of, improved of light production by)

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L61 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2004:715271** HCAPLUS
ED Entered STN: 02 Sep 2004
TI Engineering luciferase enzymes and substrates for novel assay capabilities
AU **Wood, Keith V.**
CS **Promega Corp., Madison, WI, 53719, USA**
SO Proceedings of SPIE-The International Society for Optical Engineering (2004), 5328, 69-77
CODEN: PSISDG; ISSN: 0277-786X
PB SPIE-The International Society for Optical Engineering
DT Journal
LA English
CC 9 (Biochemical Methods)
AB In the development of HTS as a central paradigm of drug discovery, fluorescent reporter mols. have generally been adopted as the favored signal transducer. Nevertheless, **luminescence** has maintained a prominent position among certain methodologies, most notably genetic reporters. Recently, there has been growing partiality for **luminescent** assays across a broader range of applications due to their sensitivity, extensive linearity, and robustness to library compds. and complex biol. samples. This trend has been fostered by development several new assay designs for diverse targets such as kinases, cytochrome P 450's, proteases, apoptosis, and cytotoxicity. This review addresses recent progress made in the use of **bioluminescent** assays for drug discovery, highlighting new detection capabilities brought about by engineering luciferase enzymes and substrates. In reporter gene applications, modified luciferases have provided greatly improved expression efficiency in mammalian cells, improved responsiveness to changes of transcriptional rate, and increased the magnitude of the reporter response. Highly stabilized luciferase mutants have enabled new assays strategies for high-throughput screening based on detection of ATP and luciferin. Assays based on ATP support rapid anal. of cell metabolism and enzymic processes coupled to ATP hydrolysis. Although luciferin is found natively only in luminous beetles, coupled assays have been designed using modified forms of luciferin requiring the action of second enzyme to yield **luminescence.** Due to the very low inherent background and protection of the photon-emitter afforded by the enzyme, **bioluminescent** assays often outperform the analogous fluorescent assays for analyses performed in multiwell plates.

L61 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2004:698252** HCAPLUS
DN **141:187324**
ED Entered STN: 26 Aug 2004
TI Methods and kits for dual **enzymatic** assays whereby light is quenched from **luminescent** reactions
IN **Hawkins, Erika**; Butler, Braeden; **Wood, Keith V.**

PA **Promega Corporation, USA**
SO PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-66
ICS G01N033-58; C09K011-00; G01N021-76
CC 9-5 (Biochemical Methods)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004072299	A1	20040826	WO 2004-US4075	20040212

W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GM, HR, HR, HU, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KP, KR, KR, KZ, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX, MZ, MZ, NA, NI
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2004224377	A1	20041111	US 2004-777461 20040212
PRAI US 2003-447065P	P	20030212	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004072299	ICM	C12Q001-66
	ICS	G01N033-58; C09K011-00; G01N021-76
WO 2004072299	ECLA	C12Q001/66; G01N033/543

AB The present invention relates to single and dual reporter **luminescence** assays utilizing reagents to quench an optical, e.g., an **enzyme**-mediated **luminescence**, reaction. In one embodiment of the invention, a reagent is added to an assay which selectively quenches a first **enzyme**-mediated **luminescence** reaction without affecting a subsequent distinct **enzyme**-mediated **luminescent** reaction(s). An assay kit containing one or more selective quench reagents, and compns. comprising the quench reagent(s), are also provided.

ST kit **enzymic** assay whereby light quenched from **luminescent** reaction

IT Photinus pyralis
Pyrophorus plagiophthalamus
Renilla reniformis
(luciferase-mediated **luminescence** reaction mediated by; methods and kits for dual **enzymic** assays whereby light is quenched from **luminescent** reactions)

IT **Luminescence**
Test kits
(methods and kits for dual **enzymic** assays whereby light is quenched from **luminescent** reactions)

IT Crown ethers
Glycols, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(sequestering agent; methods and kits for dual **enzymic** assays whereby light is quenched from **luminescent** reactions)

IT 9002-93-1, Triton X-100 9005-64-5, Tween 20 55779-48-1, Coelenterazine
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(**enzyme** mediated reaction quenched with; methods and kits for dual **enzymic** assays whereby light is quenched from **luminescent** reactions)

IT 9003-99-0, Peroxidase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(horseradish; methods and kits for dual **enzymic** assays whereby light is quenched from **luminescent** reactions)
IT 61970-00-1, Luciferase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(methods and kits for dual **enzymic** assays whereby light is quenched from **luminescent** reactions)
IT 9004-54-0, Dextrans, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(sequestering agent; methods and kits for dual **enzymic** assays whereby light is quenched from **luminescent** reactions)

L61 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2004:80228** HCAPLUS
DN **140:124852**
ED Entered STN: 01 Feb 2004
TI Reagent and method for determination of a substance using an immunoaggregator
IN Cantor, Thomas L.
PA USA
SO U.S. Pat. Appl. Publ., 22 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM G01N033-53
ICS G01N033-574
NCL 435007100
CC 9-10 (Biochemical Methods)
Section cross-reference(s): 15
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004018556	A1	20040129	US 2002-209162	20020729
WO 2004011607	A2	20040205	WO 2003-US23332	20030725

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-209162 A 20020729
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004018556	ICM	G01N033-53
	ICS	G01N033-574
	NCL	435007100

AB The present disclosure relates to reagents and methods useful for analyzing for the presence or amount of a particular analyte in a sample. Such reagents and methods are particularly useful in that false pos. and false neg. results are suppressed. The reagent comprises (a) an immunoreactant that specifically binds to an analyte; and (b) an aggregate which suppresses a false pos. or a false neg. signal caused by an interferent if present in the sample. The aggregate comprises protein components which do not specifically bind to the analyte. The protein components are aggregated together by an immunoaggregator that specifically binds to the protein components. The aggregate is formed without chemical crosslinking or heat treatment. An aggregate was formed

between mouse IgG and goat anti-mouse IgG antibody immunoaggregator. The aggregate suppressed heterophilic antibody in a human serum sample.

ST reagent immunoassay immunoaggregator suppressing false result interferent; aggregate suppression heterophilic antibody interference blood immunoassay

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgA, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgA, monoclonal, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgD, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgE, as immunoreactant or protein component in aggregate or immunoaggregator or interferent; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgE, monoclonal, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(IgG, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG, conjugates, with label; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG, immobilized; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU

(Biological study, unclassified); ANST (Analytical study); BIOL
(Biological study); USES (Uses)
(IgG, monoclonal, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using
immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG1, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG1, monoclonal, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using
immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG2, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG2, monoclonal, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using
immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG3, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG3, monoclonal, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using
immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG4, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG4, monoclonal, as immunoreactant or protein component in aggregate

or immunoaggregator; reagent and method for determination of substances using
immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgM, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgM, monoclonal, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using
immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(TRACE (time-resolved amplified cryptate emission); reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Samples
(anal. of; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Proteins
RL: ANT (Analyte); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(as analyte or as agent immunoaggregator specifically binds to; reagent and method for determination of substances using immunoaggregators to suppress
false results caused by interferents)
IT Animal cell
Cell
Cell nucleus
Chloroplast
Endoplasmic reticulum
Eubacteria
Fungi
Golgi apparatus
Lysosome
Microsome
Mitochondria
Molecules
Organelle
Plant cell
Ribosome
Tumor markers
Virus
(as analyte; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Amino acids, analysis
Carbohydrates, analysis
Hormones, animal, analysis
Inorganic compounds
Lipids, analysis
Monosaccharides
Nucleosides, analysis
Nucleotides, analysis
Oligosaccharides, analysis
Organic compounds, analysis
Peptides, analysis
Steroids, analysis

Sterols
RL: ANT (Analyte); ANST (Analytical study)
(as analyte; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ANT (Analyte); ARG (Analytical reagent use); ARU (Analytical role, unclassified); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(as immunoreactant or protein component in aggregate or immunoaggregator or analyte; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Blood-coagulation factors
Fibrins
Lipoproteins
Rheumatoid factors
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as interferent; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Animal tissue
(biopsy in clin. sample; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(**chemiluminescence**; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Amniotic fluid
Blood plasma
Blood serum
Body fluid
Cerebrospinal fluid
Digestive tract content
Hair
Saliva
Sputum
Sweat
(clin. sample of; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Analysis
(clin.; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(complement fixation; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(crossreacting, as interferent; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(energy transfer assay; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(**enzyme**-linked immunosorbent assay; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Cytometry

(flow; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(hemagglutination test, indirect; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Allergens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(human antibody to, as interferent; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Macromolecular compounds
Polysaccharides, analysis
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(immunoaggregate further containing water-soluble; reagent and method for determination of substances using immunoaggregators to suppress false results
caused by interferents)
IT Aggregation
(immunoaggregator specifically binding protein components; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(immunoblotting; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(immunofluorometric, indirect; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(immunol. staining; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(immunopptn.; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Bos taurus
Canis familiaris
Capra
Cavia porcellus
Equus caballus
Felis catus
Gallus domesticus
Human
Mammalia
Monkey
Mus
Oryctolagus cuniculus
Ovis aries
Sus scrofa domestica
Vertebrata
(immunoreactant or protein component in aggregate or immunoaggregator derived from; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Chromatography
Dialysis

Gel permeation chromatography
Hydrophobic interaction chromatography
Ion exchange chromatography
Ultrafiltration
(in selecting aggregate with desired size; reagent and method for determination
of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(lateral flow; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(latex agglutination test; reagent and method for determination of substances
using immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal, IgD, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using
immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal, as immunoreactant or protein component in aggregate or immunoaggregator; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(nephelometric; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Aggregates
(of immunoaggregator and specifically-bound protein components; reagent and method for determination of substances using immunoaggregators to suppress
false results caused by interferents)
IT Immobilization, molecular or cellular
(of immunoreactant specific for analyte; reagent and method for determination
of substances using immunoaggregators to suppress false results caused by interferents)
IT Antibodies and Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(of other animal species, human antibody to, as interferent; reagent and method for determination of substances using immunoaggregators to suppress
false results caused by interferents)
IT Drugs
(or their metabolites as analyte; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Immunoassay
(radioimmunoassay; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)
IT Blood analysis
Buffers
Immunoassay
Molecular association
Pharmaceutical analysis
Test kits

Urine analysis
(reagent and method for determination of substances using immunoaggregators to
suppress false results caused by interferents)
IT Antigens
Reagents
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(reagent and method for determination of substances using immunoaggregators to
suppress false results caused by interferents)
IT Reaction
(reagent further comprising agent for accelerating; reagent and method
for determination of substances using immunoaggregators to suppress false
results caused by interferents)
IT Detergents
Stabilizing agents
(reagent further comprising; reagent and method for determination of substances
using immunoaggregators to suppress false results caused by
interferents)
IT Gingiva
(scrapings in clin. sample; reagent and method for determination of substances
using immunoaggregators to suppress false results caused by
interferents)
IT Organelle
(secretory granule, as analyte; reagent and method for determination of
substances using immunoaggregators to suppress false results caused by
interferents)
IT Immunoassay
(turbidimetric; reagent and method for determination of substances using
immunoaggregators to suppress false results caused by interferents)
IT Organelle
(vacuole, as analyte; reagent and method for determination of substances using
immunoaggregators to suppress false results caused by interferents)
IT Polymers, analysis
Proteins
RL: ARU (Analytical role, unclassified); BSU (Biological study,
unclassified); ANST (Analytical study); BIOL (Biological study)
(water-soluble, immunoaggregate further containing; reagent and method for
determination of substances using immunoaggregators to suppress false results
caused by interferents)
IT Immunoassay
(μ-capture; reagent and method for determination of substances using
immunoaggregators to suppress false results caused by interferents)
IT 140879-24-9, Proteasome
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical
study); BIOL (Biological study)
(as analyte; reagent and method for determination of substances using
immunoaggregators to suppress false results caused by interferents)
IT 9002-61-3, Chorionic gonadotropin
RL: ARU (Analytical role, unclassified); BSU (Biological study,
unclassified); ANST (Analytical study); BIOL (Biological study)
(human, capture antibodies to; reagent and method for determination of
substances using immunoaggregators to suppress false results caused by
interferents)
IT 67763-96-6, IGF-I
RL: ARU (Analytical role, unclassified); BSU (Biological study,
unclassified); ANST (Analytical study); BIOL (Biological study)
(murine monoclonal anti-human antibody to, conjugates with horseradish

peroxidase; reagent and method for determination of substances using immunoaggregators to suppress false results caused by interferents)

IT 9003-99-0D, Peroxidase, conjugates with murine monoclonal anti-human IGF-I antibody
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(reagent and method for determination of substances using immunoaggregators to
suppress false results caused by interferents)

L61 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2003:376823** HCAPLUS
DN **138:365147**
ED Entered STN: 16 May 2003
TI Compositions, methods and kits pertaining to **luminescent** compounds
IN **Wood, Keith**; **Hawkins, Erika**; Scurria, Mike; Klaubert, Dieter
PA **Promega Corporation, USA**
SO PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D211-70
ICS C07D241-02; C07D413-00; C12N009-02; C12Q001-34; C12Q001-66; G01N033-53
CC 9-14 (Biochemical Methods)
Section cross-reference(s): 80
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003040100	A1	20030515	WO 2002-US34972	20021101
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003153090	A1	20030814	US 2001-53482	20011102
EP 1451155	A1	20040901	EP 2002-802815	20021101
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
PRAI US 2001-53482	A	20011102		
WO 2002-US34972	W	20021101		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003040100	ICM	C07D211-70
	ICS	C07D241-02; C07D413-00; C12N009-02; C12Q001-34; C12Q001-66; G01N033-53

OS MARPAT 138:365147
AB A method of measuring the enzymic activity of a luciferase includes contacting a luminogenic protein, such as a luciferase, with a protected luminophore to form a composition; and detecting light produced from the composition
The protected luminophore provides increased stability and improved signal-to-background ratios relative to the corresponding unmodified coelenterazine.

ST compn kit pertaining **luminescent** compd protein
IT Cell
Luminescent substances
(compns., methods and kits pertaining to **luminescent** compds.)
IT Proteins
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(luminogenic; compns., methods and kits pertaining to **luminescent** compds.)
IT 61869-41-8, Renilla luciferase
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(compns., methods and kits pertaining to **luminescent** compds.)
IT 50909-86-9P 55779-48-1P 65417-16-5P 70217-82-2P 524066-91-9P
524066-92-0P 524066-93-1P 524066-94-2P 524066-95-3P 524066-96-4P
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(compns., methods and kits pertaining to **luminescent** compds.)
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Bryan; US 6416960 B1 2002 HCAPLUS
(2) Garini; US 6165734 A 2000 HCAPLUS
(3) Hideshi, N; Journal American Chem Society 2001, V123, P1523
(4) Inouye, S; Biochemical and Biophysical Research Communications 1997, V233, P349 HCAPLUS
(5) Jones, K; Trends in Biotechnology 1999, V17, P477 HCAPLUS
(6) Roelant; US 6171809 B1 2001 HCAPLUS
(7) Shimomura, O; Biochemistry Journal 1989, V261, P913 HCAPLUS
(8) Shimomura, O; Biochemistry Journal 1995, V306, P537 HCAPLUS

L61 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:108790 HCAPLUS
DN 139:129758
ED Entered STN: 12 Feb 2003
TI Coelenterazine derivatives for improved solution solubility
AU **Hawkins, Erika M.**; O'Grady, Michael; Klaubert, Dieter; Scurria, Michael; Good, Troy; Stratford, Cathy; Flemming, Rod; Simpson, Dan; **Wood, Keith V.**
CS **Promega Corporation, Madison, WI, 53715, USA**
SO Bioluminescence & Chemiluminescence: Progress & Current Applications, [Proceedings of the Symposium on Bioluminescence and Chemiluminescence], 12th, Cambridge, United Kingdom, Apr. 5-9, 2002 (2002), 149-152. Editor(s): Stanley, Philip E.; Kricka, Larry J. Publisher: World Scientific Publishing Co. Pte. Ltd., Singapore, Singapore. CODEN: 69DPGZ; ISBN: 981-238-156-2
DT Conference
LA English
CC 7-3 (**Enzymes**)
Section cross-reference(s): 9
AB Intracellular **luminescent** techniques requiring coelenterazine, such as **bioluminescence** resonance energy transfer (BRET), calcium detection, and intracellular reporter measurements, must accommodate the poor stability of this substrate in physiol. buffered solns. Coelenterazine degradation leads both to loss of **luminescence** over time, and increased background **luminescence** caused by enzyme-independent oxidation (**autoluminescence**). Both conditions limit **luminescence** sensitivity by reducing the signal-to-noise ratio. Coelenterazine can be stabilized by derivatizing the enol oxygen with an acyl oxymethyl ether. This prevents spontaneous oxidation in solution while making the substrate available intracellularly upon cleavage of the blocking group by endogenous esterases. We will describe the stability of pivaloyl oxymethyl coelenterazine-h (POM coelenterazine-h), and the effect of POM coelenterazine-h on intracellular **luminescence**, **autoluminescence**, and **luminescent** reaction kinetics. Also, we will present the characteristics of two other coelenterazine

derivs.
ST coelenterazine deriv improved soln soly reporter
IT **Luminescence**
(coelenterazine derivs. for improved solution solubility)
IT Animal cell line
(mammalian; coelenterazine derivs. for improved solution solubility)
IT 50909-86-9, Coelenterazine-h 61869-41-8, Renilla luciferase
524066-95-3D, diacetyl derivative 566945-96-8
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(coelenterazine derivs. for improved solution solubility)

=> => d all l70

L70 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2001:904740** HCAPLUS
DN **136:17685**
ED Entered STN: 14 Dec 2001
TI Screening of phage displayed peptides without clearing of the cell culture
IN Nock, Steffen; Kassner, Paul D.
PA Zyomyx, Inc., USA
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-569
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 3
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001094950	A2	20011213	WO 2001-US18421	20010605
WO 2001094950	A3	20020510		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002058269	A1	20020516	US 2001-874547	20010604
US 6686154	B2	20040203		
PRAI US 2000-209503P	P	20000605		
US 2001-874547	A	20010604		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001094950	ICM	G01N033-569
US 2002058269	ECLA	C12N015/10C1

AB The invention concerns methods for screening populations of phage-displayed polypeptides that are particularly well-suited for high-throughput screening. The methods do not require the clearing of cells from a culture used to obtain the population of phage or other replicable genetic **packages.** Accordingly, the invention provides methods for forming complexes between a replicable genetic **package** displaying a polypeptide fusion and a target mol. in an uncleared cell culture containing replicable genetic **package.** Compns. made up of an uncleared cell culture containing replicable genetic **packages** displaying a polypeptide fusion and a target mol. are provided in the invention as well.

ST phage display library high throughput screening fusion protein culture
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Fab; screening of phage displayed peptides without clearing of cell culture)
IT Analytical apparatus
(array; screening of phage displayed peptides without clearing of cell culture)
IT Medical goods
(aspirators; screening of phage displayed peptides without clearing of cell culture)
IT Spheres
(beads; screening of phage displayed peptides without clearing of cell culture)
IT Separation
(elutriation; screening of phage displayed peptides without clearing of cell culture)
IT Immunoassay
(**enzyme**-linked immunosorbent assay; screening of phage displayed peptides without clearing of cell culture)
IT Virus
(eukaryotic; screening of phage displayed peptides without clearing of cell culture)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fragments, scFv; screening of phage displayed peptides without clearing of cell culture)
IT Recombination, genetic
(products of; screening of phage displayed peptides without clearing of cell culture)
IT Animal tissue culture
Bacteriophage
Eukaryota
High throughput screening
Immobilization, molecular or cellular
Microarray technology
Microtiter plates
Molecular association
Nucleic acid amplification (method)
Nucleic acid library
PCR (polymerase chain reaction)
Phage display library
Process automation
Prokaryota
Purification
(screening of phage displayed peptides without clearing of cell culture)
IT Carbohydrates, analysis
DNA
Nucleic acids
Organic compounds, analysis
Peptides, analysis
RNA
cDNA
RL: ANT (Analyte); ANST (Analytical study)
(screening of phage displayed peptides without clearing of cell culture)
IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(screening of phage displayed peptides without clearing of cell culture)
IT Primers (nucleic acid)
RL: NUU (Other use, unclassified); USES (Uses)

(screening of phage displayed peptides without clearing of cell culture)
IT Fusion proteins (chimeric proteins)
RL: ANT (Analyte); ANST (Analytical study)
(surface-displayed replicable genetic **package** polypeptide and a potential binding polypeptide; screening of phage displayed peptides without clearing of cell culture)

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L100 ANSWER 1 OF 5 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN **2004-553193** [53] WPIX
DNN **N2004-437692** DNC **C2004-202404**
TI Enhancing tolerance of assay reagent comprising luciferase enzyme to compound in assay sample not having living cells, by contacting luciferase enzyme with tolerance enhancement agent to protect enzymatic activity from compound.
DC A96 B04 D16 S03
IN BULLEIT, R F; CALI, J J; **HAWKINS, E**; HO, S K S; O'BRIEN, M; SOMBERG, R; **WOOD, K V**
PA (PROM-N) **PROMEGA CORP**
CYC 106
PI WO 2004059294 A2 20040715 (200453)* EN 68 G01N000-00
RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
AU 2003300008 A1 20040722 (200476) G01N000-00
ADT WO 2004059294 A2 WO 2003-US41454 20031223; AU 2003300008 A1 AU 2003-300008

20031223
FDT AU 2003300008 A1 Based on WO 2004059294
PRAI US 2003-447334P 20030213; US 2002-436173P 20021223;
US 2003-444264P 20030131
IC ICM G01N000-00
AB WO2004059294 A UPAB: 20040818
NOVELTY - Enhancing (M1) the tolerance of an assay reagent to **compounds** in an assay sample not containing living cells, where the assay reagent comprises a luciferase enzyme, involves contacting the luciferase enzyme with a tolerance enhancement agent in an amount sufficient to substantially protect luciferase enzymatic activity from interference of the **compound.**

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) determining (M2) the effect of a **compound** on a non-**luminogenic** enzyme activity in an assay sample not containing living cells, comprising:

(a) providing a **compound** and a **luminogenic molecule**, where the **luminogenic molecule** is a substrate of the non-**luminogenic** enzyme and a pro-substrate of a luciferase enzyme, contacting the **compound** and the non-**luminogenic** enzyme to produce a first reaction mixture, contacting the first reaction mixture with a reagent composition comprising luciferase, the **luminogenic molecule**, and a tolerance enhancement agent to produce a second reaction mixture, where the tolerance enhancement agent is present in an amount effective to substantially protect the activity of the luciferase from interference from the **compound**, detecting **luminescence** in the second reaction mixture, and determining the effect of the **compound**, if any, on the non-**luminescent** enzyme activity by comparing the detected **luminescence** to the **luminescence** of a similar reaction mixture not containing the **compound**, or containing the **compound** at a different concentration;

(b) carrying out the providing and contacting steps as mentioned above in (a), where in the contacting step, a first reaction mixture is produced, contacting the first reaction mixture with the **luminogenic molecule** to produce a second reaction mixture, contacting the second reaction mixture with a reagent composition comprising luciferase and a tolerance enhancement agent to produce a third reaction mixture, where the tolerance enhancement agent is present in an amount effective to substantially protect the activity of the luciferase from interference from the **compound**, detecting **luminescence** in the third reaction mixture, and carrying out the determining step as mentioned in (a);

(c) providing a **luminogenic molecule** and a **compound** for testing, where the **luminogenic molecule** is a substrate for the non-**luminogenic** enzyme and a pro-substrate for luciferase, contacting the **compound**, the **luminogenic molecule** and a non-**luminogenic** enzyme to produce a first reaction mixture, carrying out the step of contacting the first reaction mixture with a reagent composition as mentioned in (a), and performing detecting and determining steps of (a); or

(d) providing a **compound** for testing, a substrate for the non-**luminogenic** enzyme, a non-**luminogenic** enzyme, and ATP or ADP, contacting the **compound**, the substrate, ATP or ADP, and a non-**luminogenic** enzymes to produce a first reaction mixture, carrying out the step of contacting the first reaction mixture with a reagent composition as mentioned in (a), and performing detecting and determining steps of (a);

(2) determining (M3) the effect of a **compound** on ATP generating enzyme activity in a sample not containing living cells,

involves providing a ADP and a **compound** for testing, contacting the **compound**, ADP and a sample to produce a first reaction mixture, carrying out the step of contacting the first reaction mixture with a reagent composition as mentioned in (a) of (M2), and performing detecting and determining steps of (a) of (M2);

(3) determining (M4) **compound** on a kinase enzyme activity in an assay sample not containing living cells, involves providing a **compound** for testing, a kinase substrate, a kinase enzyme and ATP or ADP, contacting the **compound**, the substrate, ATP or ADP, and kinase enzyme to produce a first reaction mixture, carrying out the step of contacting the first reaction mixture with a reagent composition as mentioned in (a) of (M2), performing the step of detecting as mentioned in (a) of (M2), and determining the effect of the **compound**, if any, on kinase enzyme activity by comparing the detected **luminescence** to the **luminescence** of a similar reaction mixture not containing the **compound**, or containing the **compound** at a different concentration; and

(4) a kit (K1) comprising a tolerance enhancement agent for substantially protecting luciferase activity from interference from a test **compound**, a luciferase enzyme, optional buffer reagents, and optional directions for using K1.

USE - (M1) is useful for enhancing the tolerance of an assay reagent comprising luciferase enzyme to **compounds** in an assay sample not containing living cells (claimed). (M1) is useful in screening of **compound** libraries by luciferase-based assays. (M1) is useful for quantitating products or occurrences of certain biospecific reactions in cellular and cell-free systems. (M1) is useful for determining the effect of small **molecules** (including **organic** and inorganic **molecules** and synthetic and naturally occurring **molecules**) on cell-free enzyme assays, which allows the assessment of whether the small **molecule** may function as a pharmaceutical. (M1) is useful in determining the effect of a small **molecule** or **compound** on a cell-free enzyme. (M1) is useful for determining the effect of one or more **compounds**, on enzyme, e.g., protease activity by detecting and quantifying luciferin levels in a sample. (M1) is useful for measuring effects of **compounds** such as inorganics, small **molecules**, peptides, protein, polypeptides, carbohydrates, lipids, steroids, pollutants, carcinogens or drugs on a biospecific event when contacted with a sample.

ADVANTAGE - (M1) improves the accuracy of luciferase-based assays for high throughput screening of **compound** libraries by reducing the number of false hits. The luciferases generate a stable signal or yield enhanced duration of **luminescence** in a luciferase reaction. The luciferases allow for multiple analysis of a sample over time or analysis of many samples over time, 1 hour after the luciferase combine with the reagent composition. The luciferases have enhanced thermostability properties. (M1) enables determination of less than 5 uU, or less, e.g., less than 1 uU, 0.5 uU or 0.2 uU of caspase in a sample. (M1) enables effective and accurate detection and quantification of ATP or luciferin levels. (M1) enables simple qualitative and quantitative detection of ATP in a sample. (M1) enables detection and quantification of kinase activities.

Dwg.0/2

FS CPI EPI

FA AB; DCN

MC CPI: A12-V03C2; A12-W11L; B04-B01B; B04-C03; **B04-L03A**; **B04-L05**; B04-N04; **B11-C07B4**; B11-C08E3; B11-C10A; B12-K04E; D05-A02A; D05-A02C; D05-H09

EPI: S03-E04E

TECH UPTX: 20040818

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Method: In (M1)-(M3), the tolerance enhancement agent comprises a detergent or a non-detergent. The tolerance enhancement agent comprises cationic, anionic, non-ionic or

zwitterionic detergent. The detergent comprises Tergitol (RTM), Brij 35 (RTM), Brij 58 (RTM), Triton X-100 (RTM), Triton X-305 (RTM), Triton N101 (RTM), CHAPS (RTM), CHAPSO (RTM), Bigchap (RTM), Thesit (RTM), Pluronic L64 (RTM), Rhodasurf 870 (RTM), Chemal LA-9 (RTM), Sulfonyl 465 (RTM), deoxycholate, cetyltrimethylammonium bromide (CTAB), Pierce C08 (RTM) or Pierce C10 (RTM) detergent, preferably Tergitol NP-9 (RTM). The non-detergent comprises polyethylene glycol, polyvinyl pyridine, crown ether and cyclodextrin. In (M2) and (M3), the steps are conducted consecutively. The contacting steps are conducted simultaneously. The contacting and detecting steps are conducted simultaneously. The non-**luminogenic** enzyme is a protease such as trypsin, trypsinase or caspase, where the caspase comprises caspase-3, caspase 7 caspase 8 or caspase-9. The **luminogenic** substrate comprises an aminoluciferin amino modified with an amino acid or peptide or its carboxyl protected derivative. The non-**luminogenic** enzyme is a cytochrome P-450 enzyme. The **luminogenic** substrate is a D-luciferin derivative. The tolerance enhancement agent is Tergitol detergent, where the Tergitol (RTM) detergent is Tergitol NP-9 (RTM) detergent. The non-**luminogenic** enzyme is a kinase. The compound and enzyme are contacted for a first predetermined time period prior to contact with the substrate and ATP or ADP. The substrate and ATP or ADP are added sequentially or simultaneously. The ATP generating enzyme is a kinase or phosphatase. In (M4), the kinase enzyme is a protein kinase. The compound and kinase enzyme are contacted for a first predetermined time period prior to contact with the substrate and ATP or ADP. The substrate and ATP or ADP are added sequentially or simultaneously. The steps are carried out sequentially. The contacting steps are carried out simultaneously. In (M2)-(M4), the tolerance enhancement comprises Tergitol (RTM), Thesit (RTM) or Chaps (RTM) detergent.

Preferred Kit: K1 further comprises optional luciferase substrate or pro-substrate. K1 further comprises ATP.

ABEX UPTX: 20040818

EXAMPLE - Luciferase inhibitors, Emodin and tyrphostin AG494, were identified from the library of pharmaceutically active compounds (LOPAC) screen. The compounds were identified as potential inhibitors of certain cytochrome P450 enzymes. Luciferase activity was assayed in the presence of luciferin, with or without the compounds, and in the absence or presence of five different detergents at two different concentrations. First, three luciferin-inhibitor 2X mixes were prepared. Each contained 100 mM potassium phosphate, 20 nM luciferin, 0.1 mg/ml Sf9 control cell microsomal membranes. The control mix containing no inhibitor was also prepared. Second, eleven 2X luciferin detection reagents were reconstituted from a lyophilized cake containing UltraGlo (RTM) luciferase (100 micrograms/ml), ATP (400 microM), and excipient (0.4% Prionex (RTM)) using a buffer (200 mM tricine, pH 8.4 and 20 mM magnesium sulfate). The final 2X reaction mixtures contained one of the following: no detergent, 0.2% TOMAH, 2% TOMAH, 0.2% Tergitol NP-9 (RTM), 2% Tergitol NP-9 (RTM), 0.2% Thesit (RTM), 2% Thesit (RTM), 0.2% CHAPS (RTM), 2% CHAPS (RTM), 0.2% Triton X-100 (RTM) and 2% Triton X-100. The final concentration was either 0%, 0.1% or 1% detergent. Finally, 50 microL of each luciferin-inhibitor mix was combined with 50 microL of each luciferin detection reagent in triplicate on white luminometer 96-well plates, mixed, and read on a BMG Fluostar luminometer. The result indicated the relief of inhibition on luciferase by detergents in a standard luciferase-based reaction in the presence of luciferase inhibitors tryphostin or emodin.

L100 ANSWER 2 OF 5 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN **2004-482090** [46] WPIX
DNN **N2004-380205** DNC **C2004-179357**
TI Detecting peroxide activity in cells or tissue, useful in e.g. histology or medicine, uses soluble styrene derivative as substrate to form a localized fluorescent reaction product.
DC B04 D16 S03

IN HALBHUBER, K; KRIEG, R
PA (UYJE) UNIV SCHILLER JENA
CYC 1
PI DE 10255894 A1 20040617 (200446)* 32 C12Q001-28
ADT DE 10255894 A1 DE 2002-10255894 20021128
PRAI DE 2002-10255894 20021128
IC ICM C12Q001-28
AB DE 10255894 A UPAB: 20040720
NOVELTY - Detecting peroxide activity by fluorescence, comprising incubating a test cell or tissue in a solution containing a substrate which is a readily soluble styrene derivative (S) that generates a fluorescent reaction product (X) at a site of enzymatic activity, is new.

DETAILED DESCRIPTION - Detecting peroxide activity by fluorescence, comprising incubating a test cell or tissue in a solution containing a substrate which is a readily soluble styrene derivative (S) that generates a fluorescent reaction product (X) at a site of enzymatic activity. The fluorescence can be measured with standard optical filters and systems. The method is especially suitable for long-term histological localization. The styrene derivative comprises formula (I) and has a fully conjugated pi electron system.

The new feature is that (S) is a readily soluble styrene derivative of formula (1) having a fully conjugated pi electron system. During oxidation (1) forms, with reaction partners in the sample, a fluorescent product fixed at the site.

X = hydroxy or amino, preferably at 4-position;

R asterisk and R asterisk asterisk = hydroxy, amino or other substituents that may contain heteroatoms but are not very bulky, preferably also able to function as leaving groups, or convertible to leaving groups, e.g. halo, halomethyl, methoxy or trialkylsilylmethyl;

a + b = 4 or less;

R1 and R2 = hydrogen or specific groups; and

Y = specific groups that contain double bonds, preferably substituted aryl or heteroaryl.

An INDEPENDENT CLAIM is also included for a kit for the new method comprising (1) in one or more containers, also optionally auxiliaries such as buffers, solvent auxiliaries, fluorescence modulators, e.g. antibleaching agents, and/or detergents.

USE - The method is used for functional or spatial detection of analytes, particularly peroxidases but also, e.g. other enzymes, hydroperoxides and/or reactive oxygen species, in cells or tissues, in histology, molecular biology, medicine, pharmacy or the biological sciences.

ADVANTAGE - The method produces a fluorescent signal with high spatial resolution and long-lasting fixation at the site of enzymatic activity, and thus a highly sensitive detection. Practically no background fluorescence can be detected.

Dwg.0/10
FS CPI EPI
FA AB; GI; DCN
MC CPI: B04-F01; **B04-L03B**; B06-C; B06-E01; B06-F01; B08-C02; B10-A15; B10-A22; **B11-C07B3**; B11-C08E1; B11-C08E3; B12-K04E; D05-A02A; D05-H09
EPI: S03-E04E; S03-E09E
TECH UPTX: 20040720
TECHNOLOGY FOCUS - **ORGANIC** CHEMISTRY - Preparation: (1) are prepared by standard Knoevenagel condensation between an acidic methylene **compound** and reactive carbonyl **compound.**
Preferred Kits: The components are **packaged**, optionally together, in undissolved form and water is added to produce a solution containing 0.1-50, preferably 1-10, mg/l of (1). The kit may also include an oxidizing agent, particularly hydrogen peroxide.
Preferred Composition: A particularly preferred composition comprises 0.3-1 mg (I); 4.77 g 2-(4-(2-hydroxy-ethyl)-piperazin-1-yl)-ethanesulfonic

acid (HEPES) buffer and 1-100(10) microl of Tween 20. Alternatively, (1) and other components are formulated as a concentrate or as a ready-for-use solution.

ABEX UPTX: 20040720
SPECIFIC COMPOUNDS - Preparation of 36 (1) is disclosed, e.g. 3-ethyl-2-(4-hydroxystyr-2'-yl)benzothiazolium iodide

EXAMPLE - A 5-6 micron cryostat section of rat gastric mucosa was incubated with 3-ethyl-2-(4-hydroxystyr-2'-yl)benzothiazolium iodide, then fluorescence excited at 550 or 400 nm. At both wavelengths, fluorescent spots of peroxidase activity were detected under a standard fluorescent microscope.
DEFINITIONS - Preferred Definitions:
R1 and R2 = alkyl or cyano;
Y = fused ring heterocycle (benzothiazole, benzoxazole or benzimidazole of formula (i) or quinoline of formula (ii)) or phenyl of formula (iii), naphthyl of formula (iv), anthracenyl of formula (v) or pyrenyl of formula (vi) (all optionally substituted) or -CR'''=CR'''-Z;
X = O, N and S;
X1 = N or N+;
R3 and R4 = H, alkyl or aryl;
R5 = alkyl, aryl, O or N;
R' and R'' = H, alkyl, diaminoalkyl, hydroxy or nitro;
R'+R'' = 1-5 substituents;
R''' = hydrogen, alkyl, cyano or amino; and
Z = aryl or heteroaryl as specified for Y.

L100 ANSWER 3 OF 5 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN **2004-347851** [32] WPIX
DNN **N2004-278353** DNC **C2004-132297**
TI Measuring cytochrome P450 enzyme activity in a cell involves contacting a **luminogenic** molecule with cytochrome P450 substrate in the cell and **bioluminescent** enzyme and determine the activity by measuring **luminescence.**
DC B02 B04 D16 S03
IN CALI, J J; DAILY, W; FRACKMAN, S; **HAWKINS, E**; HO, S K S; KLAUBERT, D; **WOOD, K V**
PA (PROM-N) **PROMEGA CORP**
CYC 105
PI WO 2004027378 A2 20040401 (200432)* **EN** 130 G01N000-00
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
US 2004171099 A1 20040902 (200458) C12Q001-26
AU 2003267245 A1 20040408 (200462) G01N000-00
ADT WO 2004027378 A2 WO 2003-US29078 20030916; US 2004171099 A1 Provisional US 2002-412254P 20020920, Provisional US 2003-483309P 20030627, US 2003-665314 20030919; AU 2003267245 A1 AU 2003-267245 20030916
FDT AU 2003267245 A1 Based on WO 2004027378
PRAI US 2003-483309P 20030627; US 2002-412254P 20020920; US 2003-665314 20030919
IC ICM C12Q001-26; G01N000-00
AB WO2004027378 A UPAB: 20040520
NOVELTY - Measuring cytochrome P450 enzyme activity in a cell, comprising contacting a **luminogenic** molecule (A1) with at least one cytochrome P450 substrate (B1) in the cell or in animal tissue and at least one **bioluminescent** enzyme (C1) to produce a reaction mixture, and determining cytochrome P450 activity by measuring **luminescence** (preferably **chemiluminescence**) of the

reaction mixture, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) screening (S1) of at least one compound for its effect on cytochrome P450 activity, comprising:

(a) contacting the compound; (A1), cell, animal tissue or living transgenic teleost containing (B1); and (C1) to produce a reaction mixture; and

(b) determining cytochrome P450 activity by measuring **luminescence**;

(2) a kit comprising at least one (A1) and directions to use;

(3) a D-luciferin derivative of formula (III) that is a substrate of a cytochrome P450 enzyme and a pro-substrate of luciferase enzyme;

(4) a composition comprising (III); and

(5) enhancing the stability of **luminescent** signal generated by a luciferase-base reaction mixture involves contacting luciferase with a reversible luciferase inhibitor (1 micro M-1 mM, preferably 1-500, especially 10-200, particularly 100 micro M) to enhance the stability and prolong lifetime of the **luminescent** signal to the **luminescent** signal generated in a comparable luciferase-base reaction mixture in the absence of the inhibitor.

R1b = 1-20C alkoxy, 1-20C alkenyloxy, 3-20C alkynyloxy, cycloalkoxy, cycloalkylamino, 1-20C alkylamino, di-1-20C alkylamino, 2-20C alkenylamino, di-2-20C alkenylamino, 2-20C alkenyl 1-20C alkylamino, 3-20C alkynylamino, di-3-20C alkynylamino, 3-20C alkynyl 1-20C alkylamino, 3-20C alkynyl, 2-20C alkenylamino (all optionally substituted by halo, OH, amino, CN, azido, heteroaryl or aryl substituted by haloalkyl), H or hydroxy;

R2b and R3b = C or N;

R4b and R5b = S, O, NR8 or CR9R10;

R8 = H or 1-20C alkyl;

R9 and R10 = H, 1-20C alkyl or F;

R6b = CH2OH, COR11b or -OM+;

R11b = H, OH or 2-20C alkenyl; and

R7b = H, 1-6C alkyl, 1-20C alkenyl, halo or 1-6C alkoxide.

Provided that:

(1) when R1b is OH, then R7b is other than H, R11b is other than OH, R2b and R3b are not both carbon, and R4b and R5b are not both S (luciferin or dehydroluciferin); and

(2) when R1b is OH, R7b is other than H, R6b is other than CH2OH, R2b and R3b are not both carbon, and R4b and R5b are not both S (luciferol).

USE - For measuring the activity of a cytochrome P450 enzyme in a cell or animal tissue of animal (e.g. transgenic animal having **bioluminescent** enzyme transgene (preferably luciferase transgene), for screening a compound for its effect on cytochrome P450 activity in a cell or animal tissue of animal (e.g. transgenic animal having **bioluminescent** enzyme transgene (preferably luciferase transgene) (claimed).

ADVANTAGE - The method enhances the stability of **luminescent** signal.

Dwg.0/17

FS CPI EPI

FA AB; GI; DCN

MC CPI: B04-B04B; B04-B04D; B04-B04G; B04-B04H; B04-B04L; **B04-L03C**; B06-H; **B11-C07B3**; **B11-C07B4**; B12-K04E; D05-A02C; D05-H09

EPI: S03-E04E; S03-E09E; S03-E14H

TECH UPTX: 20040520

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Method: (A1), (B1) And (C1) are contacted at the same time. (A1) is contacted with the cell or animal tissue containing (B1) to form a first reaction mixture (M1) prior to contacting with (C1) to form a second reaction mixture (M2). The cell containing the cytochrome P450 enzyme expresses (C1) and further contacted

with lysis reagent. The cell is lysed prior to the step of contacting and determining. In (S1), the **compound**, (A1), (B1) and (C1) are contacted at the same time or simultaneously. The **compound**, (A1) and the cell or animal tissue containing (B1) are contacted first to form first reaction mixture (M3) prior to contacting with (C1) to form a second reaction mixture (M4). The **compound** is first contacted with the cell or animal tissue containing (B1) to form a first reaction mixture (M5). (M5) is then contacted with (A1) to form second reaction mixture (M6). (M6) is then contacted with (C1) to form a third reaction mixture. (M2), (M4) And (M6) additionally comprises detergent (preferably non-ionic detergent) and pyrophosphatase (preferably inorganic pyrophosphatase). In (S1), the biological sample is taken from the animal prior to exposure to the **compound.**
Preferred kit: The kit further comprise (C1), ATP and magnesium ions, a detergent (preferably non-ionic), a pyrophosphatase (preferably inorganic pyrophosphatase) or a reversible luciferase inhibitor. (A1) Is a D-luciferin derivative of formula (I) (where R1 is also optionally substituted 3-20C alkynyl-1-20C alkylamino) that is a substrate of cytochrome P450 enzyme and a pro-substrate of a luciferase enzyme.

TECHNOLOGY FOCUS - BIOLOGY - Preferred Sample: The biological sample comprises blood, serum, bile, urine, feces or tissue.

TECHNOLOGY FOCUS - **ORGANIC** CHEMISTRY - Preferred Components:
(A1) is luciferin derivative of formula (I) or coelenterazine derivative of formula (II). The reversible luciferase inhibitor is 2-(4-aminophenyl)-6-methylbenzothiazole or 2-amino-6-methylbenzothiazole.
R1 = 1-20C alkoxy, 2-20C alkenyloxy, halogenated 2-20C alkoxy, 3-20C alkynyloxy, 3-20C cycloalkoxy, 3-20C cycloalkylamino, 1-20C alkylamino, di-1-20C alkylamino, 2-20C alkenylamino, di-2-20C alkenylamino, 2-20C alkenyl-1-20C alkylamino, 3-20C alkynylamino, di-3-20C alkynylamino, 3-20C alkynyl-2-20C alkenylamino (all optionally substituted), H, OH or amino;
R2 and R3 = C or N;
R4 and R5 = S, O, NR8 or CR9R10;
R6 = CH2OH, COR11 or -OM+;
R11 = H, OH, 1-20C alkoxide, 2-20C alkenyl or NR12R13;
R12 and R13 = H or 1-20C alkyl;
M+ = alkali metal;
R7 = H, 1-6C alkyl, 1-20C alkenyl, halo or 1-6C alkoxide;
R1a = 1-20C alkyl, aralkyl (both optionally substituted by T1), branched 3-20C alkyl or 3-20C cycloalkyl;
T1 = 1-20C alkoxy, OH, halo, 1-20C alkylamino or di-1-20C alkylamino;
R2a and R3a = T2;
T2 = 1-20C alkyl, aralkyl, aryl (all optionally substituted by T1), H, branched 3-20C alkyl or 3-20C cycloalkyl; and
R4a = T2 (preferably aryl (optionally substituted by T1).
Provided that: R1 is other than OH or NH2, R7 is other than H, R6 is other than COR11, R11 is other than OH, R3 and R2 are not both carbon, and R4 and R5 are not both S at the same time (luciferin and aminoluciferin).

ABEX UPTX: 20040520
SPECIFIC COMPOUNDS - Luciferin 6' 2-chloroethyl ether, luciferin 6' benzyl ether, luciferin 6' 4-picolinyl ether, luciferin 6' 4-trifluoromethylbenzyl ether, luciferin 6' phenylethyl ether, luciferin 6' geranyl ether, luciferin 6' prenyl ether, luciferin 6' 2-picolinyl ether and luciferin 6' 3-picolinyl ether are specifically claimed as (III). Coelenterazine HH, methoxycoelenterazine HH and coelenterazine are specifically claimed as (II).

EXAMPLE - No suitable example given.

L100 ANSWER 4 OF 5 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN **2002-130752** [17] WPIX
DNN **N2002-098623** DNC **C2002-040164**

TI New method for increasing the sensitivity of a **luminescent** assay comprises carrying out the assay in the presence of an **organic compound.**

DC B04 D16 S03

IN **CENTANNI, J M; HAWKINS, E; SANKBEIL, J; WOOD, K V**

PA (PROM-N) **PROMEGA CORP**

CYC 96

PI WO 2001096862 A2 20011220 (200217)* EN 45 G01N033-48
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001075325 A 20011224 (200227)
EP 1297337 A2 20030402 (200325) EN G01N033-533 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
JP 2004503777 W 20040205 (200412) 82 G01N033-532 <--
US 2004096924 A1 20040520 (200434) C12Q001-66 <--

ADT WO 2001096862 A2 **WO 2001-US18363 20010607**; AU 2001075325 A AU 2001-75325 20010607; EP 1297337 A2 EP 2001-942027 20010607, **WO 2001-US18363 20010607**; JP 2004503777 W **WO 2001-US18363 20010607**, JP 2002-510941 20010607; US 2004096924 A1 **Cont of US 2000-590884 20000609, US 2003-692587 20031024**

FDT AU 2001075325 A Based on WO 2001096862; EP 1297337 A2 Based on WO 2001096862; JP 2004503777 W Based on WO 2001096862

PRAI **US 2000-590884 20000609; US 2003-692587 20031024**

IC ICM C12Q001-66; G01N033-48; **G01N033-532; G01N033-533**
ICS **G01N021-76**

AB WO 200196862 A UPAB: 20020313
NOVELTY - A method for increasing the sensitivity of a **luminescent** assay comprises carrying out the assay in the presence of an **organic compound** that reduces **luminescence** that is not dependent on the presence of an analyte by at least 10 fold, and that reduces **luminescence** that is dependent on the presence of an analyte by less than 7 fold.

DETAILED DESCRIPTION - A method for increasing the sensitivity of a **luminescent** assay comprises carrying out the assay in the presence of an **organic compound** that reduces

(a) **luminescence** that is not dependent on the presence of an analyte by at least 10 fold, and that reduces **luminescence** that is dependent on the presence of an analyte by less than 7 fold;

(b) **luminescence** generated by **luminogenic molecules** not bound to an enzyme by at least 10 fold and that reduces the **luminescence** generated by **luminogenic molecules** bound to an enzyme by less that 7 fold; or

(c) **autoluminescence** by at least about 10 fold and that reduces **luminescence** that is dependent on the presence of an analyte by less than 7 fold.

An INDEPENDENT CLAIM is included for an assay kit comprising **packaging** material containing

(1) a **luminogenic** substrate of a **luminescent** enzyme or a **luminogenic** enzyme; and

(2) an **organic compound.**

USE - The new method is used for increasing the sensitivity of a **luminescent** assay measurement.

Dwg.0/4

FS CPI EPI

FA AB; DCN

MC CPI: **B04-L01; B11-C07B**; B11-C08E3; B12-K04E; D05-C03;

D05-H09
EPI: S03-E14H
TECH UPTX: 20020313
TECHNOLOGY FOCUS - BIOLOGY - Preferred assay: The **luminescent** assay employs a luciferase, aequorin or obelin enzyme, preferably firefly luciferase, Renilla luciferase or Cypridina luciferase. The assay is performed in the presence of whole cells. It is carried out in a solvent comprising at least 10% (preferably 25%) water by weight. The **luminescence** is reduced by less than 5 fold, preferably 2 fold. Preferred kit: The kit further comprising a substrate for a second **luminescent** enzyme, a quenching agent for a **luminescent** enzyme reaction, it further comprises ATP. The kit may comprise both a **luminogenic** substrate of a **luminescent** enzyme and a **luminogenic** enzyme.

TECHNOLOGY FOCUS - **ORGANIC** CHEMISTRY - Preferred **compounds**: The **organic compound** is present in a concentration of at least 0.1 microM, preferably 10-100mM.
ABEX UPTX: 20020313
EXAMPLE - Assays were performed in the presence of Steady Glo reagent (SG) and Stop and Glo reagent (S+G). A total reaction volume of 150 microl consisted of 50 micro l F-12 (Ham) media + 1 mg/ml gelatin (with or without enzyme), 50 microl S+G (containing substrate) and 50 microl SG. The compound to be tested was re-suspended in either SG or S+G reagent to a final concentration of SG or S+G of (1X). For controls, the SG or S+G reagent was brought up to 50 microl with water or with the solvent used to dissolve the compound of interest. For each concentration of a particular compound, a mixture containing all of the components in sufficient amounts for four reactions as assembled. From this mixture, 150 microl was dispensed into triplicate wells on a 96-well plate. Alternatively, reactions were sometimes assembled in each well of the plate by adding each of the 50 microl portions and mixing. The plate was incubated at 22 degrees C and after 5 minutes the **luminescence** was measured using a Dynex plate luminometer (1 second measurement per well).

L100 ANSWER 5 OF 5 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN **1991-240023** [33] WPIX
DNN **N1991-183056** DNC **C1991-104306**
TI Detecting living organisms - using cell binding molecules on solid carrier and lysis for detection of metabolite using light-producing enzyme.
DC B04 D16 S03
IN DIMOND, R L; PAHUSKI, E E; SCHUMM, J W; SIVESIND, T M
PA (PROM-N) **PROMEGA CORP**; (TOXW) TOYO INK MFG CO
CYC 15
PI EP 441469 A 19910814 (199133)*
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
AU 9068478 A 19910725 (199137)
JP 04262258 A 19920917 (199244) 14 G01N033-53 <--
ADT EP 441469 A EP 1991-300007 19910102; JP 04262258 A JP 1991-15735 19910117
PRAI US 1990-467649 19900119
REP DE 3224484; EP 153283; EP 16552; EP 363510; US 3660240; US 3745090; US 4282287; US 4385113; WO 8607094; WO 8902929
IC ICM **G01N033-53**
ICS C12Q001-66; G01N033-54; G01N033-543
AB EP 441469 A UPAB: 19930928
A process for determining the presence of an antigenic cell substance including a detection metabolite in a sample comprises: (a) contacting the sample with cell binding **molecules** (CBMs) designed to bind to the antigenic cell substance, the CBMs being bound to a solid carrier insol. in the sample, to form a complex between the CBMs and the antigenic cell substance; (b) separating the solid carrier from the sample; (c) lysing the cell wall of the antigenic cell substance to release the detection metabolite; (d) adding a light producing enzyme reagent to the treated

sample; and (e) detecting the presence of the detection metabolite.
The detection metabolite may be e.g. ATP, NAD+, NADH, FMNH2 or FMN. The light-producing enzyme may be a firefly-luciferase reagent or a click beetle luciferase reagent. Pref. the CBMs are antibodies. The solid carrier may be a microtitre plate, test tube, polystyrene beads, a plastics material or a magnetic particle, e.g. coated with protein A. The cell walls may be lysed by the addition of an **organic** solvent, a surfactant or an acid, e.g. HNO3, trichloroacetic acid (TCA), perchloric acid or H2SO4.
USE/ADVANTAGE - The method is used for the rapid and sensitive assay of specific cell types in a sample. The method is used especially for analysing food and beverage samples for microorganisms such as Salmonella. The method is specific for live cells.
1/7

FS CPI EPI
FA AB; GI; DCN
MC CPI: B03-C; **B04-B02C2**; B04-B03B; B04-B04A; B04-B04C; B04-B04J; B04-C03B; B06-F03; B11-C07A4; B12-K04A4; B12-K04E; D03-K03; D03-K04; D05-A02A; D05-H04
EPI: S03-E04E; S03-E14A; S03-E14H

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FILE COVERS 1907 - 14 Dec 2004 VOL 141 ISS 25
FILE LAST UPDATED: 13 Dec 2004 (20041213/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L133 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:571242 HCAPLUS
DN 139:130399
ED Entered STN: 25 Jul 2003
TI Methods and compositions for assaying homocysteine for **enzymatic** analysis of human mutant S-adenosylhomocysteine hydrolase and diagnostic application
IN Yuan, Chong-Sheng
PA General Atomics, USA
SO PCT Int. Appl., 103 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N
CC 9-4 (Biochemical Methods)

Section cross-reference(s): 7, 13

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003060478	A2	20030724	WO 2003-US866	20030110
	WO 2003060478	A3	20040108		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-43787 A 20020110

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003060478	ICM	G01N

AB The present invention relates to compns. and methods for assaying homocysteine (Hcy) and thus related moieties, e.g., S-adenosylhomocysteine (SAH) or adenosine. More particularly, assay methods that employ, mutant SAH hydrolase having binding affinity for Hcy, SAH or adenosine but has attenuated catalytic activity, are provided. The modified **enzymes** and fusion proteins containing the modified **enzymes** are also provided. Pecific mutations include amino acid residue substitution(s) at catalytic site, its binding site for NAD+, NADH, Hcy, SAH or adenosine, or a combination, such as R38E, C53S, L54G, T57G, T57S, E59D, N80G, S83G, Y100T, K121A, D131E, D134E, E155G, T157G, T158Y, T159Y, N181D, N181A, D190A, N191A, L214A, Y221S, K226A, F235S, I240L, N248A, D263G, G269D, R285D, D292G, H301T, K309R, K322G, R329A, L347F, L347Y, L3471, M351A, H353R, S361G, F362S, Y379S, L386A, K388G, H398A, K401R, K401D, T407S, L409G, S420T, P424A, F425S, P427A, D428G, H429A, Y430T, R431K, R431G, Y432S, Y432A, and Y432F.

ST homocysteine assay adenosylhomocysteine hydrolase mutant sequence human

IT **Enzymes, analysis**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(SAH conjugated to; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Human
Mammalia
(SAH hydrolase of; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Protein motifs
(binding site for NAD+, NADH, Hcy, SAH or adenosine, SAH mutation at; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Albumins, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(bovine, SAH conjugated to; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT **Enzyme functional sites**
(catalytic site, SAH hydrolase mutation at; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Plasmid vectors
(for SAH hydrolase; methods and compns. for assaying homocysteine for

enzymic anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Molecular cloning
(for mutant SAH hydrolase preparation; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Animal cell
Eubacteria
Eukaryota
Fungi
Insecta
Plant cell
Prokaryota
Yeast
(host; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Peptides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(linker, 1-15 carbon atom length, for dye conjugation; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Animal cell
(mammalian, host; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Dyes
Enzyme kinetics
Fluorescent dyes
Immobilization, molecular or cellular
Packaging materials
Reducing agents
Test kits
(methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Diagnosis
(mol.; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Fusion proteins (chimeric proteins)
RL: ARU (Analytical role, unclassified); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(of SAH; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT Amniotic fluid
Animal tissue
Blood analysis
Blood plasma
Blood serum
Body fluid
Cerebrospinal fluid
Feces
Mucus
Saliva
Semen
Sputum
Tear (ocular fluid)
Urine
(sample; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase

and diagnostic application)

IT DNA
RNA
RL: ANT (Analyte); ANST (Analytical study)
(sample; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 9003-99-0, Peroxidase
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(HRP, SAH conjugated to; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 58-85-5, Biotin 9001-40-5, Glucose-6-phosphate dehydrogenase
9001-64-3, Malate dehydrogenase 9001-78-9, Alkaline phosphatase
9013-20-1, Streptavidin
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(SAH conjugated to; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 19186-33-5, Aristeromycin 72877-50-0, Neplanocin A
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(SAH hydrolase inhibitor; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 566968-55-6P, Adenosylhomocysteinase (human)
RL: ARU (Analytical role, unclassified); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(amino acid sequence; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 53-84-9, NAD+ 58-68-4, NADH
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cofactor of SAH hydrolase; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 57-88-5, Cholesterol, analysis 59-30-3, Folic acid, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detection of; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 9026-93-1, Adenosine deaminase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(for excess adenosine removal; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 58-61-7, Adenosine, analysis 979-92-0, S-Adenosylhomocysteine
6027-13-0, L-Homocysteine
RL: ANT (Analyte); ANST (Analytical study)
(methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 2321-07-5D, Fluorescein, conjugates with S-adenosylhomocysteine
6837-70-3D, Rosamine, dye, conjugates with S-adenosylhomocysteine
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 9025-54-1P, S-Adenosylhomocysteine hydrolase
RL: ARU (Analytical role, unclassified); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(methods and compns. for assaying homocysteine for **enzymic**

anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 139787-89-6, GenBank M19937 140025-72-5, GenBank K02567 140044-35-5, GenBank M15185 140094-19-5, GenBank M80630 140246-77-1, GenBank M59033 140491-49-2, GenBank X12523 143720-16-5, GenBank X64391 148310-28-5, GenBank L11872 151525-06-3, GenBank Z26881 153055-46-0, GenBank L23836 154169-07-0, GenBank T18277 158022-80-1, GenBank l32836 158645-11-5, GenBank l35559 163954-34-5, GenBank U18942 166229-98-7, GenBank D50624 166283-27-8, GenBank R75259 169277-59-2, GenBank U14937 169277-65-0, GenBank U14960 169277-66-1, GenBank U14961 169277-67-2, GenBank U14962 169277-68-3, GenBank U14963 169277-70-7, GenBank U14976 169277-71-8, GenBank U14977 169277-73-0, GenBank U14979 169277-74-1, GenBank U14980 169277-76-3, GenBank U14982 169277-77-4, GenBank U14983 169277-79-6, GenBank U14985 169277-80-9, GenBank U14986 169277-82-1, GenBank U14988 171640-27-0, GenBank U40872 173758-81-1, GenBank X95636 176273-66-8, GenBank W21772 179861-18-8, GenBank AA023331 179903-48-1, GenBank AA023505 180126-78-7, GenBank AA030290 180437-09-6, GenBank AA035873 180443-03-2, GenBank AA036487 181331-77-1, GenBank AA060462 182474-61-9, GenBank AA087094 182711-00-8, GenBank AA096642 182718-51-0, GenBank AA097525 182795-62-6, GenBank AA102891 182912-45-4, GenBank U73107 182940-24-5, GenBank U73185 182981-10-8, GenBank AA107590 183034-60-8, GenBank AA110394 183045-77-4, GenBank AA111327 183047-24-7, GenBank AA111514 183568-40-3, GenBank AA124740 186742-94-9, GenBank U88529 188367-71-7, GenBank U75503 188421-46-7, GenBank U88065 189496-95-5, GenBank U76420 189529-74-6, GenBank AA389067 189532-16-9, GenBank AA389303 190619-24-0, GenBank AA427106 197953-90-5, GenBank U83703 199259-08-0, GenBank AA646681 199259-24-0, GenBank AA646698 199507-53-4, GenBank D49804 201133-19-9, GenBank AA695679 202771-42-4, GenBank AA754430 203889-79-6, GenBank AA803942 205609-77-4, GenBank AA869120 205610-87-3, GenBank AA869176 205611-02-5, GenBank AA869184 205611-05-8, GenBank AA869187 205615-65-2, GenBank AA869711 205631-17-0, GenBank AA871189 205632-07-1, GenBank AA871324 205636-02-8, GenBank AA871702 205636-62-0, GenBank AA871752 205637-59-8, GenBank AA871865 205638-06-8, GenBank AA871917 205638-08-0, GenBank AA871919 205890-27-3, GenBank AA874914 205900-35-2, GenBank AF052506 206499-47-0, GenBank AA900229 207165-60-4, GenBank AQ003753 207217-56-9, GenBank AF059581 207757-17-3, GenBank AA955402 209768-41-2, GenBank Z97059 210447-27-1, GenBank AF051275 210650-26-3, GenBank AI049175 212150-65-7, GenBank AI069796 212525-56-9, GenBank AF080546 212654-54-1, GenBank AF080548 212664-20-5, GenBank AJ007835 214660-76-1, GenBank AI120695 217374-49-7, GenBank AI152550 223846-39-7, GenBank AI322477 223862-70-2, GenBank AI324114 223888-40-2, GenBank AI326688 225680-31-9, GenBank AF129871 226588-63-2, GenBank AI429513 226588-69-8, GenBank AI429519 227162-78-9, GenBank AI462267 229654-68-6, GenBank AI573492 384432-56-8, GenBank M10319 384662-19-5, GenBank D45204 384752-33-4, GenBank U76422 385003-07-6, GenBank Z19779 385242-80-8, GenBank U24438 389183-57-7, GenBank M61832 389767-38-8, GenBank U82761 391555-39-8, GenBank U10439 391840-69-0, GenBank U76421 392198-78-6, GenBank U75686 392213-05-7, GenBank M61831 392215-01-9, GenBank M13792
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT 566971-24-2 566971-25-3 566971-26-4 566971-27-5 566971-28-6
566971-29-7 566971-30-0 566971-31-1 566971-32-2 566971-33-3
566971-34-4 566971-35-5 566971-36-6 566971-37-7 566971-38-8
566971-39-9 566971-40-2 566971-41-3 566971-42-4 566971-43-5
566971-44-6 566971-45-7 566971-46-8 566971-47-9 566971-48-0
566971-49-1 566971-50-4 566971-51-5 566971-52-6 566971-53-7
566971-54-8 566971-55-9 566971-56-0 566971-57-1 566971-58-2

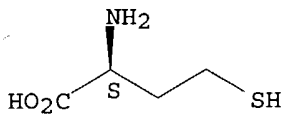
566971-59-3 566971-60-6 566971-61-7 566971-62-8 566971-63-9
566971-64-0 566971-65-1 566971-66-2 566971-67-3 566971-68-4
566971-69-5 566971-70-8 566971-71-9 566971-72-0 566971-73-1
566971-74-2 566971-75-3 566971-76-4 566971-77-5 566971-78-6
566971-79-7 566971-80-0 566971-81-1 566971-82-2 566971-83-3
566971-84-4 566971-85-5 566971-86-6 566971-87-7 566971-88-8
566971-89-9 566971-90-2 566971-91-3 566971-92-4 566971-93-5
566971-94-6 566971-95-7 566971-96-8 566971-97-9 566971-98-0
566971-99-1 566972-00-7 566972-01-8 566972-02-9 566972-03-0
566972-04-1 566972-05-2 566972-06-3 566972-07-4 566972-08-5
566972-09-6 566972-10-9 566972-11-0 566972-12-1 566972-13-2
566972-14-3 566972-15-4 566972-16-5 566972-17-6 566972-18-7
566972-19-8 566972-20-1 566972-21-2 566972-22-3 566972-23-4
566972-24-5 566972-25-6 566972-26-7 566972-27-8 566972-28-9
566972-29-0 566972-30-3 566972-31-4 566972-32-5 566972-33-6
566972-34-7 566972-35-8 566972-36-9 566972-37-0 566972-38-1
566972-39-2 566972-40-5 566972-41-6 566972-42-7 566972-43-8
566972-44-9 566972-45-0 566972-46-1 566972-47-2 566972-48-3
566972-49-4 566972-50-7 566972-51-8 566972-52-9 566972-53-0
566972-54-1 566972-55-2 566972-56-3 566972-57-4 566972-58-5
566972-59-6 566972-60-9 566972-61-0 566972-62-1 566972-63-2
566972-64-3 566972-65-4 566972-66-5 566972-67-6 566972-68-7
566972-69-8 566972-70-1 566972-71-2 566972-72-3 566972-73-4
566972-74-5 566972-75-6 566972-76-7 566972-77-8 566972-78-9
566972-79-0 566972-80-3 566972-81-4 566972-82-5 566972-83-6
566972-84-7 566972-85-8 566972-86-9 566972-87-0 566972-88-1
566972-89-2 566972-90-5 566972-91-6 566972-92-7 566972-93-8
566972-94-9 566972-95-0 566972-96-1 566972-97-2 566972-98-3
566972-99-4 566973-00-0 566973-01-1 566973-02-2 566973-03-3
566973-04-4 566973-05-5

RL: PRP (Properties)
(unclaimed nucleotide sequence; methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

IT **6027-13-0**, L-Homocysteine
RL: ANT (Analyte); ANST (Analytical study)
(methods and compns. for assaying homocysteine for **enzymic** anal. of human mutant S-adenosylhomocysteine hydrolase and diagnostic application)

RN 6027-13-0 HCAPLUS
CN L-Homocysteine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L133 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:667420 HCAPLUS
DN 137:181898
ED Entered STN: 05 Sep 2002
TI Test-device for threshold glucose detection in urine
IN Evtodienko, Vladimir; Evtodienko, Iouri; Dobler, Lydia; Van Lente, Michael A.; Lewis, Ronald A., II
PA Ralston Purina Company, USA; Environmental Test Systems, Inc.
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English

IC ICM G01N021-00
NCL 422056000
CC 9-1 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6444169	B1	20020903	US 2001-883874	20010618
	WO 2002103353	A2	20021227	WO 2002-US4721	20020219
	WO 2002103353	A3	20030515		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1402265	A2	20040331	EP 2002-704429	20020219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2003022385	A1	20030130	US 2002-232123	20020830
	US 6599474	B2	20030729		
	US 2003203499	A1	20031030	US 2003-417386	20030416
	US 6682937	B2	20040127		
PRAI	US 2001-883874	A1	20010618		
	WO 2002-US4721	W	20020219		
	US 2002-232123	A3	20020830		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6444169	ICM	G01N021-00
	NCL	422056000

AB Devices and **test kits** are provided for glucose detection and quantification in urine. The devices and kits comprise a chromogenic indicator mixture comprising a first indicator capable of color development to indicate the presence of a low-to-medium concentration of glucose, a second indicator capable of color development to indicate the presence of a higher concentration of glucose, wherein the first indicator prevents color development of the second indicator unless the higher concentration of glucose is present in the urine, and a non-chromogenic scavenger that interferes with color development of the first indicator when glucose levels are below a threshold concentration, and a carrier impregnated with the chromogenic indicator mixture

ST test device threshold glucose detection urine

IT Foils
(**package**; test-device for threshold glucose detection in urine)

IT Analytical apparatus
Animal
Box
Carriers
Color
Colorimetric indicators
Colorimetry
Concentration (condition)
Density
Glucose sensors

Humidity
Impregnation
Interference
Litter (bedding)
Mixtures
Paper
Scavengers
Sealing
Stability
Stabilizing agents
Test kits
Urine
Urine analysis
(test-device for threshold glucose detection in urine)

IT Reagents
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(test-device for threshold glucose detection in urine)

IT Phenols, uses
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(test-device for threshold glucose detection in urine)

IT Thiols (organic), analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(test-device for threshold glucose detection in urine)

IT Thiosulfates
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(test-device for threshold glucose detection in urine)

IT 50-99-7, D-Glucose, analysis
RL: ANT (Analyte); ANST (Analytical study)
(test-device for threshold glucose detection in urine)

IT 83-07-8, 4-Aminoantipyrine 98-67-9, 4-Hydroxybenzenesulfonic acid 488-17-5, 3-Methylcatechol 576-26-1, 2,6-Dimethylphenol 1934-21-0, Tartrazine 7440-23-5D, Sodium, salts 7681-11-0, Potassium iodide, uses 9001-37-0, Glucose oxidase 9003-99-0, Peroxidase 9005-25-8, Starch, uses 20461-54-5D, Iodide, salts 26281-43-6
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(test-device for threshold glucose detection in urine)

IT **52-90-4**, Cysteine, analysis 77-92-9, Citric Acid, analysis 288-32-4, Imidazole, analysis 994-36-5, Sodium Citrate 9002-93-1, Triton x-100 9004-54-0, Dextran, analysis 9005-32-7, Alginic acid
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(test-device for threshold glucose detection in urine)

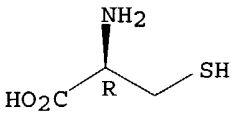
IT 9002-89-5, Poly(vinyl alcohol) 9004-34-6, Cellulose, uses
RL: DEV (Device component use); USES (Uses)
(test-device for threshold glucose detection in urine)

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) Anon; EP 0060133 B1 1982 HCAPLUS
(2) Anon; EP 0182225 B1 1985 HCAPLUS
(3) Bauer; US 4340669 A 1982 HCAPLUS
(4) Blake; US 3814668 A 1974 HCAPLUS
(5) Chen; US 4427770 A 1984 HCAPLUS
(6) Greene; US 5217691 A 1993 HCAPLUS
(7) Hochstrasser; US 3964871 A 1976 HCAPLUS
(8) Humphrey; US 3964817 A 1976
(9) Ismail; US 5185247 A 1993 HCAPLUS
(10) Jurik; US 6162397 A 2000 HCAPLUS
(11) Kiser; US 5418142 A 1995 HCAPLUS
(12) Lam; US 4303753 A 1981 HCAPLUS
(13) Meiattini; US 3886045 A 1975 HCAPLUS

(14) Omoto; US 5183742 A 1993 HCAPLUS
(15) Palmer; US 5036000 A 1991 HCAPLUS
(16) Phillips; US 5563042 A 1996 HCAPLUS
(17) Priest; US 5824491 A 1998 HCAPLUS
(18) Tomasco; US 5620863 A 1997 HCAPLUS
IT **52-90-4**, Cysteine, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(test-device for threshold glucose detection in urine)
RN 52-90-4 HCAPLUS
CN L-Cysteine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L133 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2002:511367** HCAPLUS
DN **137:75544**
ED Entered STN: 09 Jul 2002
TI Method for enhancing luciferase **luminescence** reaction
IN Kurosawa, Keiko; Kajiyama, Naoki
PA Kikkoman Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C12Q001-66
ICS G01N021-76; G01N033-58
CC 9-15 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002191396	A2	20020709	JP 2001-315397	20011012
PRAI	JP 2000-320921	A	20001020		

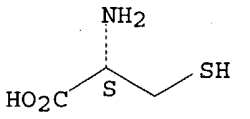
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2002191396	ICM	C12Q001-66
	ICS	G01N021-76; G01N033-58

AB A method is provided for enhancing the **luminescence** in a luciferase **luminescence** reaction using a luciferin-regenerating system. A reagent **kit** used for this method is also provided. The method is characterized by adding more than one substance selected from CoA, pyrophosphoric acid, pyridoxal phosphate, and their derivs. to the **luminescence** reaction system involving ATP, firefly luciferin, luciferase, D-cysteine, a divalent metal ion, and luciferin-regenerating enzymes. The reagent **kit** contains: (1) more than one substance selected from CoA, pyrrophosphoric acid, pyridoxal phosphate, and their derivs.; (2) D-cysteine; and (3) luciferin-regenerating enzymes.
ST luciferase **luminescence** enhancement CoA pyridoxal phosphate
IT Ions
(divalent metal; method for enhancing luciferase **luminescence** reaction)
IT **Enzymes, uses**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(luciferin-regenerating; method for enhancing luciferase

luminescence reaction)
IT **Luminescence, chemiluminescence**
Test kits
(method for enhancing luciferase **luminescence** reaction)
IT Reagents
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for enhancing luciferase **luminescence** reaction)
IT Antibodies and Immunoglobulins
RL: NUU (Other use, unclassified); USES (Uses)
(method for enhancing luciferase **luminescence** reaction)
IT Coenzymes
RL: NUU (Other use, unclassified); USES (Uses)
(method for enhancing luciferase **luminescence** reaction)
IT **Enzymes, uses**
RL: NUU (Other use, unclassified); USES (Uses)
(method for enhancing luciferase **luminescence** reaction)
IT Haptens
RL: NUU (Other use, unclassified); USES (Uses)
(method for enhancing luciferase **luminescence** reaction)
IT Nucleic acids
RL: NUU (Other use, unclassified); USES (Uses)
(method for enhancing luciferase **luminescence** reaction)
IT 56-65-5, 5'-ATP, uses **921-01-7**, D-Cysteine 2591-17-5, Firefly luciferin 2591-17-5D, Luciferin, galactoside derivative 9014-00-0, Luciferase 24963-17-5, Oxyluciferin 61970-00-1, Luciferase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for enhancing luciferase **luminescence** reaction)
IT 54-47-7, Pyridoxal phosphate 85-61-0, Coenzyme A, analysis 2466-09-3, Diphosphoric acid
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method for enhancing luciferase **luminescence** reaction)
IT 58-85-5, Biotin
RL: NUU (Other use, unclassified); USES (Uses)
(method for enhancing luciferase **luminescence** reaction)
IT **921-01-7**, D-Cysteine
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for enhancing luciferase **luminescence** reaction)
RN 921-01-7 HCAPLUS
CN D-Cysteine

Absolute stereoc



L133 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:354033 HCAPLUS
DN 136:337383
ED Entered STN: 12 May 2002
TI Diagnostic assay system
IN Ray, Robert A.
PA USA
SO U.S. Pat. Appl. Publ., 15 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM G01N031-00
NCL 436067000
CC 9-16 (Biochemical Methods)

Section cross-reference(s): 10, 14

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002055176	A1	20020509	US 2001-929751	20010814
PRAI	US 2000-246775P	P	20001108		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2002055176	ICM	G01N031-00
	NCL	436067000

AB Disclosed is a method for performing an anal. assay by providing a kit for collecting and storing a test sample, the kit including a sample collection device, a sample storage device, and a printed material having indicated thereon an electronic address for accessing the result of the assay; using the kit to collect a specimen from a test subject at a first location such as the subject's home or a health care provider's office; transporting the collected specimen to an off-site laboratory; analyzing the specimen at the off-site laboratory; and reporting the result of the anal. over a computer communications network such as the Internet.

ST diagnostic assay system

IT Materials
(Blotter; diagnostic assay system)

IT Proteins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(CR; diagnostic assay system)

IT Tools
(Lancet; diagnostic assay system)

IT Albumins, analysis
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Microalbumins; diagnostic assay system)

IT Prion proteins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(PrPSc; diagnostic assay system)

IT Materials
(Printed; diagnostic assay system)

IT Tools
(Razor; diagnostic assay system)

IT Tools
(Scissors; diagnostic assay system)

IT Apparatus
(Storage; diagnostic assay system)

IT Health
(care; diagnostic assay system)

IT Information systems
(code; diagnostic assay system)

IT Adeno-associated virus
Adenoviridae
Analytical apparatus
Arenaviridae
Bacillus (insect)
Bar code labels
Biological materials
Blood analysis
Bordetella
Borrelia
Brucella
Bunyaviridae
Chlamydia
Clostridium

Collecting apparatus
Communication
Computers
Coronaviridae
Corynebacterium
Cytomegalovirus
Diagnosis
Drying
Enterobacteriaceae
Eubacteria
Francisella
Fungi
Haemophilus
Hepatitis A virus
Hepatitis B virus
Hepatitis C virus
Hospitals
Human coxsackievirus
Human echovirus
Human herpesvirus 1
Human herpesvirus 2
Human herpesvirus 3
Human herpesvirus 4
Human immunodeficiency virus 1
Human immunodeficiency virus 2
Human poliovirus
Influenza A virus
Influenza B virus
Influenza C virus
Internet
Laboratories
Legionella
Leptospira
Listeria
Microorganism
Mycobacterium
Mycoplasma
Needles (tools)
Neisseria
Orbivirus
Packaging materials
Paper
Papillomavirus
Paramyxoviridae
Parvovirus
Polyomavirus
Poxviridae
Protozoa
Pseudomonas
Reoviridae
Rhabdoviridae
Rhinovirus
Rickettsia
Rotavirus
Samples
Staphylococcus
Storage
Streptococcus
Syringes
Test kits
Togaviridae
Transportation
Treponema

Urine analysis
Vibrionaceae
Virus
Yersinia
(diagnostic assay system)

IT Glycerides, analysis
Hemoglobins
Lipids, analysis
Prostate-specific antigen
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(diagnostic assay system)

IT Hemoglobins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(glycohemoglobins; diagnostic assay system)

IT Lipoproteins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(high-d.; diagnostic assay system)

IT Lipoproteins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(low-d.; diagnostic assay system)

IT Information systems
(network, Communications; diagnostic assay system)

IT Information systems
(network, Global communications; diagnostic assay system)

IT Information systems
(network, Local area network; diagnostic assay system)

IT Information systems
(network, Wide area network; diagnostic assay system)

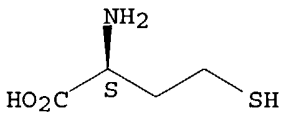
IT Retroviridae
(non-HIV; diagnostic assay system)

IT 57-88-5, Cholesterol, analysis **6027-13-0**, Homocysteine
7440-70-2, Calcium, analysis 9000-86-6, Alanine transaminase
9001-77-8, Acid phosphatase 14265-44-2, Phosphate, analysis
62572-11-6, Hemoglobin A1c
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(diagnostic assay system)

IT **6027-13-0**, Homocysteine
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(diagnostic assay system)

RN 6027-13-0 HCAPLUS
CN L-Homocysteine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L133 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:186030 HCAPLUS
DN 134:219382
ED Entered STN: 16 Mar 2001
TI Composition and **test kit** for protecting groups used in biological labeling comprising protected alkylating reagent and

deprotecting **enzyme**
IN De Keczer, Steve; Liu, Yen Ping; Davalian, Dariush; Kurn, Nurith; Ullman, Edwin F.
PA Dade Behring Inc., USA
SO PCT Int. Appl., 71 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-68
ICS C12Q001-42; C12Q001-00; C07F009-113
CC 9-16 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001018548	A2	20010315	WO 2000-US22397	20000815
	WO 2001018548	A3	20011122		
	W: JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6783947	B1	20040831	US 1999-393579	19990909
	EP 1224467	A2	20020724	EP 2000-955570	20000815
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	JP 2003508790	T2	20030304	JP 2001-522086	20000815
	US 2004198703	A1	20041007	US 2004-832540	20040427
PRAI	US 1999-393579	A	19990909		
	WO 2000-US22397	W	20000815		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001018548	ICM	G01N033-68
	ICS	C12Q001-42; C12Q001-00; C07F009-113
US 6783947	ECLA	C07F009/113+F; C07F009/113+Q; C07H015/10D; C12Q001/42; G01N033/68A2D2
US 2004198703	ECLA	C07F009/113+F; C07F009/113+Q; C07H015/10D; C12Q001/42; G01N033/68A2D2

AB Alpha-haloketones are useful alkylating agents for coupling to sulfhydryl-containing biomols. However, they react spontaneously with water, alkali and organic bases and therefore cannot be stored for extended periods of time in aqueous solns., particularly in the presence of proteins at physiol. pH. The present invention provides novel solns. to these problems, however, as novel compds. and compns. comprising protected haloketones are disclosed herein. Methods of preparing and using protected haloketones which are useful in a variety of applications - e.g., in assays and conjugation reactions - are also disclosed herein. A **kit** is described for use in a method for detecting and determining the amount of homocysteine in a sample, comprising in a **packaged** combination : a first reagent comprising a protected alkylating reagent capable of chemical modifying homocysteine to form modified homocysteine when deprotected, a second reagent comprising an activating reagent capable of deprotecting said protected alkylating reagent, and a third reagent capable of specifically binding to said modified homocysteine, each in an amount sufficient to conduct at least one assay.
ST protecting group alkylation label biomol **enzyme** deprotection
IT Alkylation
Blood analysis
Fluorescent dyes
Fluorometry
Immobilization, biochemical
Microtiter plates
Test kits
(composition and **test kit** for protecting groups used in biol. labeling comprising protected alkylating reagent and deprotecting

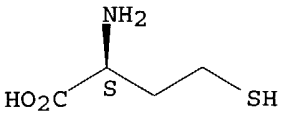
enzyme)
IT Carbohydrates, reactions
Esters, reactions
Lipids, reactions
Nucleic acids
Phosphates, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(composition and **test kit** for protecting groups used in biol. labeling comprising protected alkylating reagent and deprotecting **enzyme**)
IT Immunoassay
(**luminescent** oxygen channeling immunoassay, LOCI; composition and **test kit** for protecting groups used in biol. labeling comprising protected alkylating reagent and deprotecting **enzyme**)
IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(monoclonal; composition and **test kit** for protecting groups used in biol. labeling comprising protected alkylating reagent and deprotecting **enzyme**)
IT 541-59-3P, Maleimide 37293-51-9P, Aminodextran
RL: DEV (Device component use); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(coating for carboxyl acceptor beads, for immobilization of homocysteine antibodies; composition and **test kit** for protecting groups used in biol. labeling comprising protected alkylating reagent and deprotecting **enzyme**)
IT 17904-86-8P 192937-52-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(coating for polystyrene beads; composition and **test kit** for protecting groups used in biol. labeling comprising protected alkylating reagent and deprotecting **enzyme**)
IT **6027-13-0**, L-Homocysteine
RL: ANT (Analyte); ANST (Analytical study)
(composition and **test kit** for protecting groups used in biol. labeling comprising protected alkylating reagent and deprotecting **enzyme**)
IT 9001-62-1, Lipase 9001-78-9, Alkaline phosphatase 9013-79-0, Esterase 9032-92-2, Glycosidase 9046-59-7, Hydroxylase
RL: CAT (Catalyst use); USES (Uses)
(composition and **test kit** for protecting groups used in biol. labeling comprising protected alkylating reagent and deprotecting **enzyme**)
IT 9003-53-6, Polystyrene
RL: DEV (Device component use); USES (Uses)
(composition and **test kit** for protecting groups used in biol. labeling comprising protected alkylating reagent and deprotecting **enzyme**)
IT 66-71-7, 1,10-Phenanthroline 106-40-1, 4-Bromoaniline 112-71-0, 1-Bromotetradecane 1074-12-0, Phenylglyoxal 5961-85-3, Tris(carboxyethyl)phosphine 7087-68-5, N,N-Diisopropylethylamine 20099-90-5, 4-Bromoacetylbenzoic acid 21392-96-1 72040-63-2, NHS-LC-biotin 76597-65-4, 4-Chloroacetylbenzoic acid 103708-09-4, Sulfo-SMCC
RL: RCT (Reactant); RACT (Reactant or reagent)
(composition and **test kit** for protecting groups used in biol. labeling comprising protected alkylating reagent and deprotecting **enzyme**)
IT 172906-40-0P 192937-53-4P 329717-20-6P 329717-21-7P 329717-22-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(composition and **test kit** for protecting groups used in

biol. labeling comprising protected alkylating reagent and deprotecting **enzyme**)

IT **6027-13-0**, L-Homocysteine
RL: ANT (Analyte); ANST (Analytical study)
(composition and **test kit** for protecting groups used in biol. labeling comprising protected alkylating reagent and deprotecting **enzyme**)

RN 6027-13-0 HCAPLUS
CN L-Homocysteine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L133 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1998:599610** HCAPLUS
DN **129:290919**
ED Entered STN: 22 Sep 1998
TI **Packaging** for wrapping foaming formulations
IN Kawai, Hiroshi
PA Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B65D081-26
ICS A01N025-34; A01N063-02
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 5, 17, 19, 62

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10245075	A2	19980914	JP 1997-49081	19970304
PRAI JP 1997-49081		19970304		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 10245075	ICM	B65D081-26
	ICS	A01N025-34; A01N063-02

AB Foaming solid formulations containing a carbonate or bicarbonate, a solid acid, and active ingredient are wrapped in **packaging** material, such as water-soluble polymer film, with ≥1 hole for escaping gas, to provide a product with good storage stability and convenient handling. When the **package** is floated on water (e.g. on a paddy field), the **packaging** material dissolves gradually while the formulation sinks, gas is generated, and the active ingredient diffuses. The **packaging** may be used for formulations for agriculture, fish culture, for bathing, etc.

ST **packaging** foaming formulation; agrochem foaming formulation **packaging**

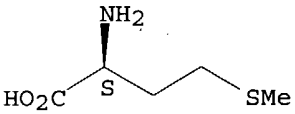
IT **Packaging materials**
(**films**; for foaming formulations)

IT Rice (Oryza sativa)
(**packaging** for wrapping foaming agrochem. formulations for)

IT Agrochemical formulations
Effervescent materials
Powders
Tablets

(**packaging** for wrapping foaming formulations)
IT Polyoxyalkylenes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**packaging** for wrapping foaming formulations)
IT Surfactants
(**packaging** for wrapping foaming formulations containing)
IT Fertilizers
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**packaging** for wrapping foaming formulations containing)
IT Bicarbonates
Carbonates, uses
RL: AGR (Agricultural use); BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)
(**packaging** for wrapping foaming formulations containing)
IT Yeast
(**packaging** for wrapping foaming formulations containing extract of)
IT Polymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(water-soluble; **packaging** for wrapping foaming formulations)
IT 9002-89-5D, Polyvinyl alcohol, partially saponified or denatured 9004-67-5, Methyl cellulose 25322-68-3, Polyethylene oxide
RL: TEM (Technical or engineered material use); USES (Uses)
(**packaging** for wrapping foaming formulations)
IT **63-68-3**, Methionine, biological studies
RL: **AGR (Agricultural use)**; BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**packaging** for wrapping foaming formulations containing)
IT **63-68-3**, Methionine, biological studies
RL: **AGR (Agricultural use)**; BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**packaging** for wrapping foaming formulations containing)
RN 63-68-3 HCAPLUS
CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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(FILE 'HOME' ENTERED AT 09:28:46 ON 14 DEC 2004)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 09:29:00 ON 14 DEC 2004
L1 1 S US20040096924/PN OR (US2000-590884# OR WO2001-US18363 OR US20
E HAWKINS E/AU
L2 86 S E3-E15,E44,E45
E CENTANNI J/AU
L3 9 S E3,E5,E6
E SANKBEIL J/AU
L4 3 S E4,E5
E WOOD K/AU
L5 152 S E3,E19,E56,E61,E62
E PROMEGA/PA,CS
L6 250 S E3-E41
E PACKAGING/CT
L7 25984 S E5-E47

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                E E3+ALL
L8          1252 S E1
                E E3+ALL
                E E13+ALL
L9         50328 S E3,E4,E2+NT
L10       111709 S PACKAG?
                E E17+ALL
L11         2507 S E3,E4
L12       126172 S L7-L11
                E LUMINESCENCE/CT
L13       144236 S LUMINESCEN?/CT
                E E3+ALL
L14       226595 S E4,E5,E3+NT
                E E79+ALL
L15        16411 S E3+NT
                E E10+ALL
                E E80+ALL
L16        36806 S E3-E5,E2+NT
                E E58+ALL
                E E81+ALL
L17         5717 S E12,E13,E11+NT
                E E24+ALL
L18        49115 S E4,E3+NT
                E LUMINESCEN/CW
L19       147227 S E4-E6
L20       249745 S ?LUMINESCEN?
L21       517405 S L11-L20
                E ENZYME/CT
L22       270183 S ENZYM?/CW
L23       226323 S ENZYM?/CT
L24       548044 S ENZYM?/SC,SX
L25       680223 S L22-L24
                E ORGANIC COMPOUND/CT
L26        41223 S E4
L27            6 S L12 AND L21 AND L25 AND L26
                E TEST KIT/CT
L28        12335 S E4
                E E4+ALL
L29        13602 S E2-E4/BI
L30         2203 S L28,L29 AND L21
L31         1089 S L30 AND (L25 OR ?ENZYM?)
L32           52 S L31 AND L12
L33           33 S L31 AND L26
L34           34 S L31 AND ORGANIC()(COMPOUND OR MOLECULE)
L35            1 S L32 AND L33,L34
L36           33 S L34 AND L32,L33
                SEL DN AN 9 21 23 33
L37            4 S E1-E12
L38            3 S L2-L6 AND L12
L39           72 S L2-L6 AND L21
L40           83 S L2-L6 AND L25
L41            3 S L2-L6 AND L26
L42            8 S L2-L6 AND ORGANIC(L)(COMPOUND OR MOLECULE)
L43            4 S L38,L41,L42 AND L39,L40
L44           34 S L39 AND L40
L45           31 S L44 NOT L37,L38,L41-L43
                SEL DN AN 2 6 9 23
L46            4 S E13-E24
L47           95 S L37-L42 NOT L43-L46
                SEL DN AN 2 3 11 39 79
L48            5 S E25-E37
L49           45 S L2-L5 AND L6
L50            6 S L2 AND L3-L5
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L51           1 S L3 AND L4,L5
L52           1 S L4 AND L5
L53           6 S L50-L52
L54          14 S L1,L37,L46,L48,L53 AND L1-L53
L55          35 S L49 NOT L54

     FILE 'HCAPLUS' ENTERED AT 10:08:55 ON 14 DEC 2004
               SEL RN L54

     FILE 'REGISTRY' ENTERED AT 10:09:09 ON 14 DEC 2004
L56         384 S E38-E421
L57           0 S L56 AND SE/ELS
L58          69 S L56 AND S/ELS
L59          66 S L58 AND C/ELS

     FILE 'HCAPLUS' ENTERED AT 10:11:03 ON 14 DEC 2004
L60           9 S L59 AND L54
L61           5 S L54 NOT L60

     FILE 'HCAPLUS' ENTERED AT 10:11:33 ON 14 DEC 2004
L62        1050 S L10 AND L21 AND L25
L63        2137 S L10 AND L21 AND ?ENZYM?
L64        2377 S L62,L63
L65           9 S L64 AND L26
L66          22 S L64 AND ORGANIC(L)(COMPOUND OR ?MOLECULE?)
L67          22 S L65,L66
L68          21 S L67 NOT L54
               SEL DN AN 7
L69           1 S L68 AND E422-E424
L70           1 S L69 AND L1-L55,L60,L61,L62-L69

     FILE 'REGISTRY' ENTERED AT 10:16:43 ON 14 DEC 2004
               SAV L59 GITOMER692/A

     FILE 'WPIX' ENTERED AT 10:16:48 ON 14 DEC 2004
L71           1 S L1
L72        1814 S G01N021-76/IPC
L73       17845 S (B11-C07B OR B11-C07B1 OR B11-C07B3 OR B11-C07B4 OR C11-C07B
L74       29485 S G01N033-53?/IPC
L75       45083 S L72-L74
L76       48026 S ?LUMINESC?/BIX OR ?LUMINOGEN?/BIX
L77       89236 S L75,L76
L78       95313 S L77 OR Q613/M0,M1,M2,M3,M4,M5,M6
L79        9424 S L78 AND (B04-L? OR C04-L? OR B04-B02C? OR C04-B02C?)/MC
L80         128 S 78 AND (B11-C08E3 OR C11-C08E3 OR D05-C03?)/MC
L81        9541 S L79,L80
L82         659 S L81 AND (ORGANIC(L)(COMPOUND OR ?MOLECULE?))/BIX
L83          18 S L82 AND ?PACKAG?/BIX
               E HAWKINS E/AU
L84          17 S E3-E7
               E CENTANNI J/AU
L85           2 S E6
               E SANKBELL J/AU
L86           2 S E2
               E WOOD K/AU
L87          49 S E3,E22
               E PROMEGA/PA
L88         146 S E3-E6
L89          66 S L78 AND L84-L88
L90          10 S L89 AND (ORGANIC(L)(COMPOUND OR ?MOLECULE?))/BIX
L91           6 S L90 AND L84-L87
L92           4 S L90 NOT L91
               SEL DN AN 4
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L93             1 S L92 AND E1-E3
                  SEL DN AN L91 2 3 6
L94             3 S E4-E12
L95             4 S L93,L94
L96            17 S L83 NOT L95
L97             3 S L96 AND ?PACKAG?()MATERIAL/BIX
L98            14 S L96 NOT L97
                  SEL DN AN 1
L99             1 S E13-E15
L100            5 S L95,L99 AND L71-L99

     FILE 'WPIX' ENTERED AT 10:51:13 ON 14 DEC 2004

     FILE 'REGISTRY' ENTERED AT 10:51:24 ON 14 DEC 2004
L101            6 S (CYSTEINE OR HOMOCYSTEINE OR METHIONINE)/CN
L102            3 S (D-CYSTEINE OR D-HOMOCYSTEINE OR D-METHIONINE)/CN

     FILE 'HCAPLUS' ENTERED AT 10:53:06 ON 14 DEC 2004
L103        69916 S L101 OR L102
L104          144 S L103 AND L12
L105         1008 S L103 AND L21
L106        14905 S L103 AND (L25 OR ?ENZYM?)
L107           23 S L106 AND L105 AND L104
L108            2 S L107 AND KIT
L109            4 S L104 AND KIT#/CW
L110            4 S L104 AND L18,L29
L111            4 S L109,L110
L112            4 S L108,L111
L113          474 S L103 (L) AGR/RL
L114           23 S L113 AND L104-L106
                  SEL DN AN 12
L115            1 S E16-E18 AND L114
L116            5 S L112,L115
L117          207 S L103 (L) DGN/RL
L118           34 S L117 AND L104-L106
L119            5 S L116 AND L1-L55,L60-L70,L103-L118
L120          157 S L103 AND TEST KIT
L121            9 S L103 AND ASSAY KIT
L122          287 S L103 AND L18,L29
L123          295 S L120-L122
L124            4 S L123 AND ?PACKAG?
L125            4 S L123 AND L12
L126            4 S L124,L125
L127            5 S L116,L126
L128          100 S L123 AND L25
L129          174 S L123 AND L21
L130           68 S L128 AND L129
L131           20 S L130 AND KIT
                  SEL DN AN 13
L132            1 S E19-E21 AND L131
L133            6 S L127,L132
L134           48 S L130 NOT L131

     FILE 'HCAPLUS' ENTERED AT 11:05:21 ON 14 DEC 2004

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